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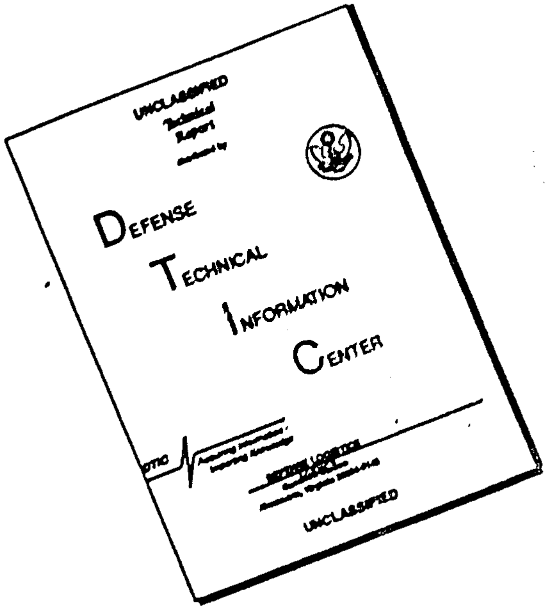

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(6)

ONE-PASS PERFORMANCE OF VEHICLES ON FINE-GRAINED SOILS.

(9) Final rept.

by

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SUMMARY

Tests were conducted during a one-year field program, ending in November 1964, to study the one-pass performance of self-propelled vehicles in natural, weak, fine-grained soils. Four types of vehicle tests were run: self-propelled, drawbar pull, speed and maneuver. Tests were run with a number of tracked and wheeled vehicles over a range of test weights, tire pressures, and soil strengths, and in two soil types. The field program and subsequent analyses had the following purposes:

1) to develop
   a. a reliable strength index for fine-grained soils with which predictions may be made of the performance of a vehicle on its first pass on a straight, level course, and
   b. a nominal vehicle load index to be used with the soil strength index to establish whether or not a vehicle will go; and

2) to provide means to predict
   a. one-pass drawbar pull and slope performance in soils having strengths in excess of the minimum required for one vehicle pass on level terrain,
   b. the increment of soil strength index necessary to permit a vehicle to maneuver freely, and
   c. the probable maximum speed of a vehicle operating in a terrain situation where the soil strength index exceeds the net vehicle load index.

From mid-October 1963 to mid-January 1964, testing was done in a heavy clay (CH)* at Lake Centennial, Mississippi; and for two weeks in February and March 1964, in a clayey silt (ML) and silty clay (CL) at Grenada, Mississippi. In addition, exploratory tests not programmed in the original one-pass study were conducted at two sites, Fort Stewart, Georgia, and Camp Shelby, Mississippi, during April and May 1964. Soils at these sites were silty sands (SM) with perched water tables (water table less than 15 inches from the soil surface). Both the Lake Centennial and Grenada test sites were revisited during the latter half of 1964, but conditions were unfavorable and it was not possible to develop the full range of test data at these areas that had been anticipated.

Relationships were first developed, from semi-empiric analyses of the basic field measurements and data from past WES trafficability testing, as applicable, between soil strength and vehicle straight-line, level, go/no-go performance. Using these results as a basis, further approximate expressions were then developed for vehicle drawbar pull, maneuver strength requirements, and maximum speed as functions of soil strength.

First-order answers are proposed to the five basic questions posed at the project outset. These answers utilize minor adaptations of techniques and concepts developed by WES in their 50-pass trafficability work, and define modified "vehicle cone indices" (VCI_1) and soil "rating cone index" (RCI_1) procedures appropriate to the one-pass problem. The ratio (VCI_1/RCI_1) is used as the basic soil loading numeric in simple approximate calculations of drawbar pull, grade performance, soil strength increments necessary to permit free maneuvering, and probable maximum speeds, all as influenced by soil strengths.

*Soil types in this report are classified according to the Unified Soil Classification System.

CONTENTS

PREFACE

Tests conducted during a one-year investigation of the one-pass performance of vehicles in natural soils are reported. Although the data available from this program are not complete enough in any section of the program to permit definitive treatment, the results provide useful first-order answers to basic questions of performance levels of military vehicles during a single pass in weak, fine-grained soils.

This study was conducted by Wilson, Nuttall, Raimond Engineers, Inc. (WNRE), under Contract No. DA 22-079-eng-394 with the U. S. Army Engineer Waterways Experiment Station (WES). It comprises a portion of the mobility environmental research study (MERS), sponsored by the Office, Secretary of Defense (OSD), Advanced Research Projects Agency (ARPA), Directorate of Remote Area Conflict, for which WES is the prime contractor, and the U. S. Army Materiel Command (AMC) is the service agent. The broad mission of Project MERS is to develop a significant research effort to study the physical environment as it affects design and employment of materiels systems, with special emphasis upon Southeast Asian environments. The funds employed for this study were allocated to WES through AMC, under ARPA Order No. 400. In particular, the work is concerned with the development of one-pass soil trafficability criteria.

Field data were collected by engineers and technicians of the Trafficability Section, Army Mobility Research Branch, Mobility and Environmental Division, under the technical monitorship of WNRE.

ACKNOWLEDGEMENTS

Responsibility for the technical content of this report lies, of course, entirely with the contractor. However, the project was a cooperative effort between WNRE and WES, in all of the best sense; and the support, enthusiasm, constructive criticism, and free release of ideas and data by *all* WES personnel accounts in large measure for such progress as was made. In particular, it is necessary to acknowledge the help given by the unremitting interest and drive of Mr. A. A. Rula, chief of MERS Branch; the consistent administrative and technical support of his assistants, Messrs. R. D. Wismer and R. R. Friesz; the spirited criticism of Mr. S. J. Knight and Dr. D. R. Freitag, assistant chief, Mobility Environmental Division, and chief, Army Mobility Research Branch (AMRB), respectively; and the continuous, effective field support of Mr. E. S. Rush, chief of Trafficability Section, AMRB, and of his engineers, Messrs. A. B. Thompson and B. G. Schreiner, and technicians, Messrs. W. J. Hicks and R. G. Temple. Finally, thanks are due Messrs. M. P. Meyer and J. L. Smith, both of AMRB, for generously allowing WNRE project personnel to see their "work in progress" on allied studies which contributed many useful insights, considerable backup data, and much clarification.

LIST OF SYMBOLS

a = running gear material to soil adhesion (psi)

A = vehicle frontal area (ft^2)

b = undeflected tire section width (in.)

b_t = track width (in.)

BHP = engine brake horsepower (HP)

c = apparent soil cohesion (psi)

C = surface intercept of linearized curve of cone index to depth (psi)

CI = cone index (psi)

$CI^{3/8}$ = cone index measured with WES cone penetrometer having 3/8" diameter shaft (psi)

$CI^{5/8}$ = cone index measured with WES cone penetrometer having 5/8" diameter shaft (psi)

$\overline{CI}$ = average cone index of a soil bed considered to be approximately uniform with depth (psi)

$\overline{CI}_{(z_1-z_2)}$ = average cone index for soil bed layers between depth z_1 and z_2 (psi)

d = undeflected tire outside diameter (in.)

d_b = bogie wheel diameter (in.)

d_{rf} = wheel diameter over rim flange (in.)

D = maximum drawbar pull of a vehicle in a soil (lb)

D_1 = maximum drawbar pull of a single wheel or track in a soil (lb)

E = Young's modulus for soil (psi)

f = running gear material to soil coefficient of friction

f_r = rubber to soil coefficient of friction

G = average gradient of soil cone index with depth ($lb/in.^3$)

G_r = vehicle gradeability

h = tire section height over rim flange (in.)

HP_A = driving power available at wheel(s) or sprocket(s) (HP)

k,K = various constants

K_τ = surface shear strength parameter

ℓ = effective contact length of wheel or tire (in.)

L = length of track on (hard, level) ground (in.)

M_r = moment resisting rotation of a vehicle during a turn (lb ft)

n,m = various constants

n_b = number of bogie wheel stations per track

N = radius ratio/slip parameter

p = average pressure resisting plate penetration (psi)

(P) = number of passes completed in same ruts

q = soil bearing capacity (psi)

q_1 = Evans' nominal peak soil loading under a track (psi)

q_{crit} = soil bearing capacity at which vehicle immobilization becomes imminent (psi)

q_n = nominal unit ground pressure of a track or wheel (psi)

Q_r = driveline torque required to maintain a steady turn of radius r_t (lb ft)

Q_s = driveline torque required for straight, level, slow-speed operation (lb ft)

r = undeflected tire outside radius (in.)

r_t = vehicle turning radius (in.)

R = gross equivalent motion resistance from soil action (lb)

ΣR = total vehicle motion resistance from all sources (lb)

R_A = air resistance (lb)

R_P = external motion resistance due to soil plastic flow (lb)

R_S = total external motion resistance arising from soil action (lb)

R_T = resistance from track or tire internal losses (lb)

RCI = standard WES rating cone index (psi)

RCI_1 = average rating cone index for one-pass predictions (psi)

$RCI_{1,s}$ = RCI_1 for the surface, 0-1" soil layer (psi)

RI = standard WES remolding index

RI_1 = remolding correction factor for one-pass predictions

s = soil shear strength as measured by the British vane tester (psi)

s_j = slip ratio

S = contact area of track(s) or wheel(s) and soil ($in.^2$)

t = tread width (in.)

T = maximum gross traction developable by a vehicle in soil (lb)

T_i = traction developed by the inside track

T_o = traction developed by the outside track

T_1 = maximum gross traction of a single track or tire (lb)

T' = total traction available while turning

V = vehicle speed (mph)

V_s = slip speed (mph)

V_t = wheel or track peripheral speed (mph)

VCI = standard WES vehicle cone index (psi)

VCI_1 = vehicle cone index for straight, level, self-propelled operation in soil of uniform strength with depth (psi)

VCI_1' = VCI_1 when soil strength is not uniform with depth, i.e., $K_\tau \neq 1$ (psi)

VCI_1'' = VCI_1 for free maneuvering during self-propelled operation in level soil whose strength is uniform with depth (psi)

W = gross vehicle weight (lb)

W_T = gross vehicle weight (short tons)

W_1 = gross vertical load on a single tire or track (lb)

y = track pitch (in.)

z = vehicle sinkage (in.)

z_0, z_1, z_2 = soil depths, measured from the surface (in.)

δ = radial tire deflection under vertical load on a hard surface (in.)

Δ = tire deflection/tire section height

η = ratio of horsepower available at wheel(s) or sprocket(s) to overall engine brake horsepower

σ = unit normal loading on soil in shear (psi)

τ = soil unit shearing resistance (psi)

$(\tau/\sigma)_{10}$ = τ/σ as determined from Cohron sheargraph measurements, evaluated at σ = 10 psi

ϕ = apparent angle of internal friction of soil

INTRODUCTION

The continuing WES research on the relationships between soil strength as measured by the cone penetrometer (and associated procedures) and the performance of a wide range of vehicles has resulted in a practical, reasonably accurate field method for predicting the go/no-go trafficability of a given soft soil terrain to a given vehicle. Moreover, the complete program has produced methods for estimating, from other observations, the effective soil strengths (in terms of cone indices and rating cone indices) for areas where on-the-ground tests are either impractical or impossible. The basic "go" criterion adopted for each vehicle has been the successful completion of 50 passes with the vehicle traveling in the same ruts, on level ground and in a straight line path. At the time this project began, the method had been extended to the prediction of approximate drawbar pull and slope-climbing ability, and, still more approximately, to the estimation of soil strength required by a vehicle for one-pass, straight, level operation, and for extreme maneuvers.

The one-pass study reported herein is intended to meet, at least temporarily, growing needs for more valid estimates of first-pass performance, both on a go/no-go basis and in terms of probable maximum speed when conditions are "go" but still less than entirely hard. In addition, prediction of vehicle performance in real terrains, encompassing soils and obstacles and slopes, requires estimates of the increment of soil strength necessary for a given vehicle when steering is needed.

At the outset of this study, it was envisioned that the conclusions it reached would be subjected to further checking and refinement during later stages of the MERS effort. However, the MERS work was reprogrammed after the first year to seek somewhat more restricted objectives.

OBJECT

It was the object of this program

1) to develop and validate, within one year's time, working first-order definitions of:
   a. a reliable strength index for fine-grained soils with which predictions may be made of the go/no-go, first-pass performance of a vehicle operating in a straight path over level terrain, and
   b. its corollary, a nominal vehicle load index to be used with the soil strength index to establish whether or not a vehicle will go; and

2) to provide means to predict:
   a. one-pass drawbar pull and slope performance in soils having strengths in excess of the minimum required for one vehicle pass on level terrain,
   b. the increment of soil strength index necessary to permit a given vehicle to maneuver freely during a single pass, and
   c. the probable maximum speed of a given vehicle operating in a terrain situation where the soil strength index exceeds the net vehicle load index.

It was recognized that a reasonably complete solution to any one of the above problems was, in itself, a tall order. Emphasis was placed rather upon arriving in each case at the best working solutions possible within approximately one year's time, in order to permit concurrent field survey and vehicle test programs to proceed on as sound a basis as possible. These "one-year" answers are supplemented by an estimate of their probable precision and generality, a statement of their known limitations, and an outline of further work required to improve their usefulness.

BASIC APPROACH

Explicit in the project object was the requirement for validated, working answers, within a limited time frame, to a number of practical but complex vehicle/soil performance questions. Implicit was the fact that the nearly twenty-five years of prior field, laboratory, and theoretical work, while it had developed considerable understanding, had not provided the validated, working answers needed. Accordingly, the program to attain the project goals was based upon a flexible, semi-empiric plan using available general understanding of vehicle/soil relationships and results obtained from field tests of prototype vehicles operating in natural soils.

Data available from prior test programs were to be utilized where available, and were to be supplemented by results from a modest field program to be conducted, for support purposes, in the general area of Vicksburg, Mississippi. In the new program, self-propelled, drawbar pull, speed, and maneuver tests were to be conducted with a small selection of tactical military vehicles in several types of fine-grained soils.

The demonstrated, practical field success of the WES cone penetrometer procedures and extensions thereof in meeting 50-pass trafficability prediction problems suggested that these procedures could be further developed to cope with the new, but evidently related, one-pass prediction needs. The program was therefore oriented from the outset towards the use of the cone penetrometer (and subsidiary instruments) as the basic system for measuring soil strengths in conjunction with vehicle performance data. The considerable analytical and laboratory work by Sherratt, Evans, and Uffelmann on vehicle performance in clays [summarized as of 1955 by Uffelmann in Reference 1]* and on-going WES research in controlled laboratory soil bins, using the cone penetrometer as the basic soil instrument [since synthesized by Freitag in Reference 2], further supported such an approach. It was, of course, anticipated that the consolidation of measurements made by the cone penetrometer and associated procedures into a soil strength index applicable to the one-pass problem might differ from that found suitable for 50-pass predictions. Principal among the 50-pass procedure details which were to be critically reviewed in the new light were the designation of a "critical layer" and appropriate interpretation of "remolding indices" [3].

It was also anticipated that, during a first pass, "slipperiness" or traction failure would often limit vehicle performance rather than bearing failure, although in the 50-pass studies this was rare. In the 1962 field trials in Panama [4], reported "slipperiness" immobilizations were numerous. The cone penetrometer, as might be expected where the action of a thin surface layer governed performance, appeared to be a relatively insensitive indicator of this behavior. Accordingly, an exploratory field study was planned to establish approximate ranges of "slipperiness" indices (such as external and internal friction and/or cohesion of surface soil layers) associated with the test soil types, as functions of the cone indices of the basic soil body, surface and underlying moisture content. The light, portable Cohron sheargraph [5] was selected as the field instrument for use in measuring shear strengths in the soil surface layers.

The semi-empiric analytical framework within which the field test program was designed was outlined at the outset of the project [6]. It included an analytically based, statistically oriented computer program to facilitate objective selections, from analyses of the field data, of an optimum cone penetrometer interpretation and of corresponding numerical values for the one-pass vehicle cone index (VCI_1)* for each test vehicle [7].

Inasmuch as it was planned to base slope, drawbar, maneuver, and speed criteria upon the basic RCI_1-VCI_1 relationship, the development of VCI_1 information and of corresponding procedures for determining RCI_1 was given priority in both tests and detailed analyses.

*Numbers in brackets refer to references tabulated beginning on page 33.

*Both RCI and VCI are familiar terms in WES 50-pass trafficability work. The subscript "1" is added to each to denote similar concepts in relation to one-pass performance.

TESTING CHRONOLOGY

Selection of the cone penetrometer approach to soil strength measurement made potentially useful much of the unique and extensive vehicle performance/soil strength data collected by WES over the 18 years of their work on 50-pass trafficability. As another part of the overall program, these past WES data were consolidated in a uniform format [8] and, under the present study, were examined for results pertinent to the one-pass study. Unfortunately, the records contained relatively little data useful in the present context. The earlier investigations were concerned primarily with 50-pass criteria, and consequently tests were deliberately conducted in soils of higher strengths than those which produce early immobilizations. Many of the earlier investigations were in prepared lanes and therefore could shed no direct light upon remolding phenomena. Later tests often omitted soil measurements determined previously to be unnecessary for the 50-pass work, but now considered of interest in the one-pass analyses.

As it became clear that usable past data were not as extensive as had been hoped for initially, the program was reoriented to obtain more new basic field data than was originally planned. The required new tests began in haste, on a limited scale, on 21 October 1963 in order to capitalize upon advantageous river-stage conditions which made certain heavy clay (CH) test areas ideal for testing in the immediate vicinity of Vicksburg (Lake Centennial) available at that time (Fig. 1). Considerable data on self-propelled performance of the vehicles were developed during the period 21 October through 18 January 1964. Tests were terminated due to a rise in the Mississippi River level which inundated the test area.

Fig. 1. General view of Lake Centennial test site.

An exploratory two-week program was conducted in clayey silt (ML) and silty clay (CL) in the vicinity of Grenada (Fig. 2) from 25 February through 6 March 1964. Although the soil mass strength levels appeared suitable, frequent, heavy rains caused vehicle drawbar pull to be appreciably lower than was expected on the basis of average cone index values (surface shear strength being the influencing factor rather than the mass soil strength) (Fig. 3). Tests were terminated when rising water flooded all test areas.

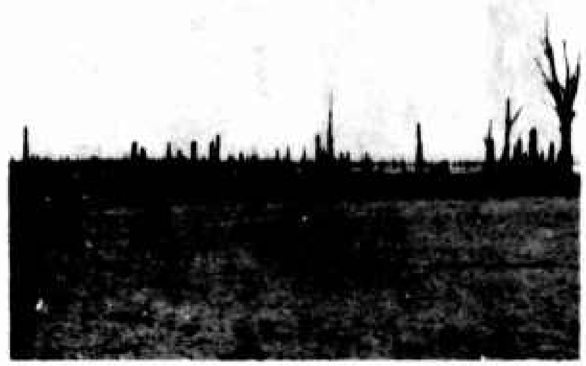


Fig. 2. General view of Grenada Lake test site.

The work at Grenada reemphasized the importance of surface soil strength (slipperiness) on vehicle one-pass behavior, particularly with regard to drawbar pull and/or slope performance. A "slipperiness" test program was initiated at WES in mid-March 1964 using three vehicles on two prepared courses, one having a heavy clay and the other a clayey silt. However, this was preempted by an immediate requirement by WES for data on the performance of vehicles in silty sands with perched water tables, necessitating test programs at two areas -- one at Fort Stewart, Georgia (Fig. 4), and the second at Camp Shelby, Mississippi (Fig. 5) -- during April and May 1964. Surface traction tests were resumed at WES during a six-week period in June-July 1964.

Testing in heavy clay at Lake Centennial was resumed in July 1964 and continued until the end of September 1964, when a combination of heavy vegetal growth and surface crusting (and cracking) of the soil (Fig. 6) made further testing unrewarding.

Fig. 3. M37 with 9.00-16 tires. Immobilized due to traction failure. Sinkage=4".

Fig. 5. Camp Shelby test site. Field party making soil measurements.

Fig. 4. Fort Stewart test site.

Fig. 6. Shrinkage cracks in CH soil still present from previous year after 6-8 months of inundation.

A second series of tests in the clayey silt (ML) and silty clay (CL) soils at Grenada was initiated in early October 1964 and continued intermittently until 1 December 1964, at which time all field tests were suspended due to a decision to terminate further investigations under this task. As in the previous program at Grenada, frequent rains caused variations in the surface strength of the soil and these variations are reflected in the data collected, particularly in the drawbar and maneuver tests.

Eight hundred and thirty-five tests were conducted during the period reported. Of these, 480 tests were conducted in CH soil at Lake Centennial, 127 in ML and CL soils at Grenada, 211 in SM soil at Fort Stewart and Camp Shelby, and 17 tests were conducted on the two surface traction courses at WES.

THE TEST VEHICLES

The field test program ultimately embraced, at one point or another, 20 different vehicles representing a range of running gear types, gross weights up to about 20,000 pounds, and average-to-good overall practical mobility. They are shown in Figures 7 to 26. Several of these vehicles, immobilized in weak soils on early passes, are shown in Figures 27 to 38. Principal characteristics of each of the 20 vehicles are summarized in Tables 1 and 2.

Five vehicles of particular interest from the research viewpoint were initially selected as the "backbone" of the test program. These were:

Tracked vehicles	Normal test weight	Nominal unit ground pressure
1) M29C Weasel	5,960 lb.	1.9 psi
2) D4 Standard Tractor w. standard 13" tracks	13,580 lb.	4.6 psi
3) Polecat (a 4-track articulated vehicle using Weasel tracks and suspension)	12,580 lb.	2.0 psi
Wheeled vehicles		
4) M37, 3/4T, 4x4, w. 9.00-16 8PR tires	7,240 lb.	11.8 psi*
5) M35A1, 2-1/2T, 6x6, w. 11.00-20 12PR single tires	19,410 lb.	14.0 psi*

Vehicles 1, 3, 4, and 5 were instrumented by means of commercial torquemeters for the measurement of driveline torque during drawbar pull and maneuver tests.

The D4 (vehicle 3) was tested during the first test phase at Lake Centennial for the development of self-propelled and drawbar pull criteria. It was subsequently replaced as one of the prime vehicles in the program by an M29C Weasel equipped with 12-inch tracks, and hence having a nominal unit ground pressure of 3.2 psi. This vehicle was equipped with a driveline torquemeter, so that in the later tests all of the principal vehicles were so equipped.

The six principal vehicles were of particular importance in the planned development of maneuvering and speed criteria, where the tests were designed to examine a number of simple, first-order hypotheses concerning the relationships between each of these desired performance features, VCI_1 and RCI_1.

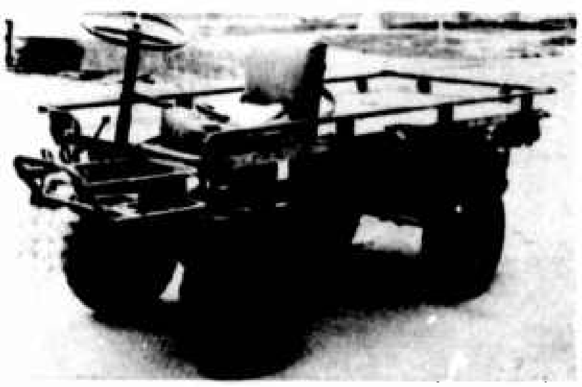


Fig. 7. M274, 1/2-ton, 4x4 weapons carrier with 7.50-10 tires.

* Nominal unit ground pressure for tires is taken to be

$$NUGP = W_1/br$$

where W_1 = average single tire load, lb
b = undeflected tire section width, in.
and r = undeflected tire radius, in.

TABLE 1

WHEELED VEHICLE CHARACTERISTICS

VEHICLE	TIRE	VEHICLE TEST WEIGHT -LBS.-	INFLA-TION PRESSURE -PSI-	TIRE WIDTH -INS.-	TIRE DIA. -INS.-	CONTACT PRESSURE -PSI-	GROUND CLEARANCE -INS.-	WHEEL-BASE -INS.-	TREAD -INS.-
M274, 4x4, 1/2 TON	7.50-10, NDCC	1,190	30.0	8.5	22.5	16.3	11.5	57.0	40.5
			10.0	8.5	22.5	11.6	11.5	57.0	40.5
			5.0	8.5	22.5	7.4	11.5	57.0	40.5
	7.50-10, NDCC	1,940	30.0	8.5	22.5	22.2	11.5	57.0	40.5
			10.0	8.5	22.5	11.0	11.5	57.0	40.5
			5.0	8.5	22.5	7.8	11.5	57.0	40.5
	16.00-15 TERRA TIRES	1,325	15.0	15.1	17.4	15.4	9.0	57.0	57.0
			3.0	15.1	17.4	5.4	9.0	57.0	57.0
	16.00-15 TERRA TIRES	1,940	15.0	15.1	17.4	16.2	9.0	57.0	57.0
			3.0	15.1	17.4	4.7	9.0	57.0	57.0
M151, 4x4, 1/4 TON	7.00-16, NDCC	3,560	30.0	7.1	28.6	34.5	10.3	85.0	53.0
			15.0	7.1	28.6	21.6	10.3	85.0	53.0
	9.00-14, SMOOTH	3,560	30.0	8.6	26.2	26.7	9.1	85.0	53.0
			20.0	8.6	26.2	20.7	9.1	85.0	53.0
	36.00-20 TERRA TIRES	3,560	15.0	20.2	37.5	15.9	14.8	85.0	71.3
			3.0	20.2	37.5	6.3	14.8	85.0	71.3
M37, 4x4 3/4 TON	9.00-16, NDCC	7,240	30.0	10.2	32.8	32.9	10.8	112.0	62.0
			15.0	10.2	32.8	22.9	10.8	112.0	62.0
			6.5	10.2	32.8	14.9	10.8	112.0	62.0
	46.00-18 TERRA TIRES	7,240	15.0	20.0	48.0	12.3	18.4	112.0	77.8
			3.0	20.0	48.0	6.2	18.4	112.0	77.8
M35A1, 6x6, 2-1/2 TON	11.00-20, NDCC	19,410	35.5	11.2	43.[illegible]	41.7	12.3	178.0	67.4
			13.0	11.2	43.6	24.8	12.3	178.0	67.4

TABLE 2

TRACKED VEHICLE CHARACTERISTICS

VEHICLE	VEHICLE TEST WEIGHT -LBS.-	TRACK WIDTH -INS.-	TRACK CONTACT LENGTH -INS.-	CONTACT PRESSURE -PSI-	GROUND CLEARANCE -INS.-	TREAD -INS.-	TRACK PITCH -INS-	NUMBER OF BOGIES/SIDE	BOGIE SIZE -INS-
DINAH, 1/2 TON	4,095	20.0	80.0	1.3	10.5	40.0	4	3	18
	4,975	20.0	80.0	1.6	10.5	40.0	4	3	18
M29C, WEASEL	4,960	20.0	78.0	1.6	11.0	45.0	4-1/2	8*	8
	5,960	20.0	78.0	1.9	11.0	45.0	4-1/2	8*	8
	5,960	12.0	78.0	3.2	11.0	45.0			
D/4, ENGINEER TRACTOR	12,420	13.0	61.0	8.4	11.0	44.5	6.5	4	8
	14,870	13.0	61.0	9.2	11.0	44.5	6.5	4	8
	13,585	24.0	61.0	4.6	11.0	44.5			
POLECAT, MODEL 941	12,580	20.0	156.0	2.0	11.0	45.0	4-1/2	16*	8
M5A4, HI-SPEED TRACTOR	28,350	17.1	117.5	7.1	19.8	90.4	5-1/2	4	20
M56, SELF-PROPELLED GUN	15,500	20.0	93	4.2	15.0	78.0	4	4	26-1/8
M113, ARMORED PERSONNEL CARRIER	22,900	15.0	105.0	7.2	16.1	85.0	6	5*	23-7/8
M114, ARMORED PERSONNEL CARRIER	14,750	16.5	102.0	4.4	14.0	73.3	4	4*	21-7/8
M116, CARRIER, CARGO, 1-1/2 TON	8,435	20.0	104.0	2.0	15.5	58.0	4-1/4	5*	22
	10,610	20.0	104.0	2.6	15.5	58.0	4-1/4	5*	22
M41 TANK, COMBAT, 76MM GUN	45,000	21.0	128.0	8.4	17.7	102.5	6	5	25-1/2
M59, ARMORED PERSONNEL CARRIER	42,870	21.0	143.0	7.1	18.0	103.0	6	5	25-1/2
M48A1, TANK, COMBAT, 90MM GUN	98,400	28.0	157.5	13.0	15.3	115.0	7	6*	26

* Dual Bogies

Fig. 8. M151, 1/4-ton, 4x4 truck with 7.00-16 tires.

Fig. 9. M37, 3/4-ton, 4x4 truck with 9.00-16 tires.

Fig. 10. M35A1, 2-1/2-ton, 6x6 truck with 11.00-20 single tandem tires.

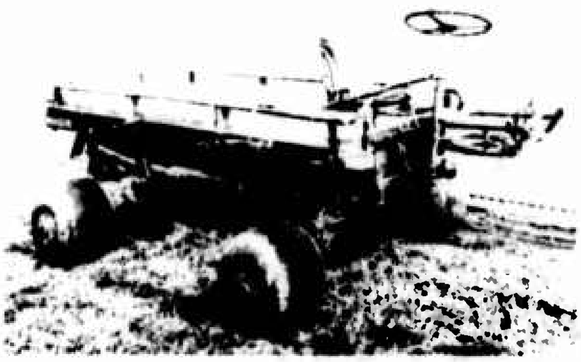


Fig. 11. M274, 1/2-ton, 4x4 weapons carrier with 16.00-15 Terra-Tires.

Fig. 12. M151, 1/4-ton, 4x4 jeep with 9.00-14 smooth tires.

Fig. 13. M151, 1/4-ton, 4x4 jeep with 36.00-20 Terra-Tires.

Fig. 14. M37, 3/4-ton, 4x4 truck with 46.00-18 Terra-Tires.

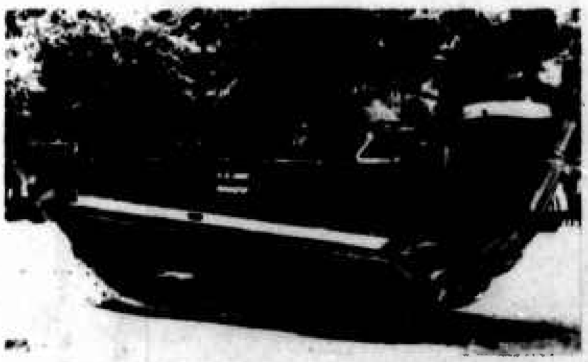


Fig. 15. M29C cargo carrier with 20" tracks.

Fig. 16. M29C cargo carrier with 12" tracks.

Fig. 17. "Dinah" articulated cargo carrier.

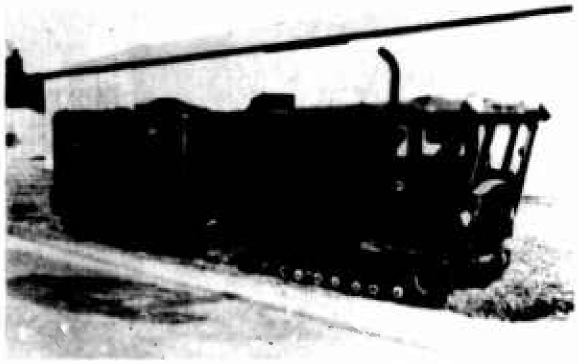


Fig. 18. Polecat Model 941 articulated personnel carrier.

Fig. 19. M4 high-speed tractor.

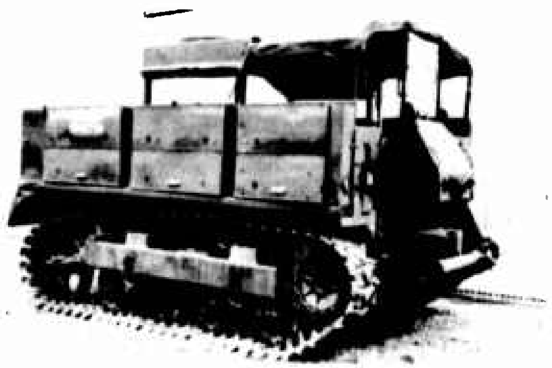


Fig. 20. M5A4 high-speed tractor.

Fig. 21. D4 engineer tractor.

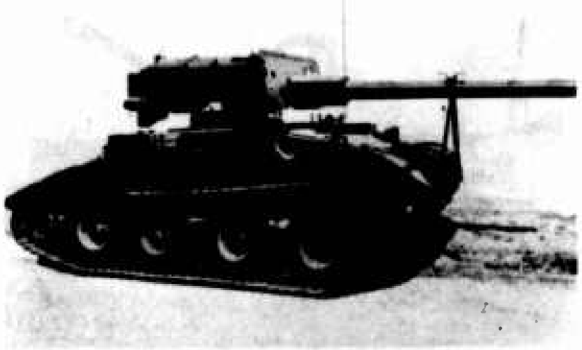


Fig. 22. M56 self-propelled gun.

Fig. 23. M116 cargo carrier.

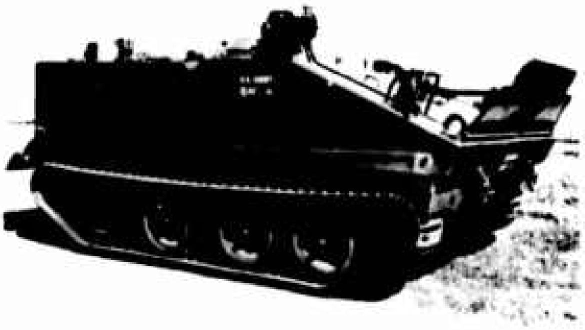


Fig. 24. M114 personnel carrier.

Fig. 25. M59 personnel carrier.

Fig. 26. M48A1 medium tank.

Fig. 27. M274 with 7.50-10 tires. Immobilized on 1st pass.

Fig. 28. M274 with 16.00-15 Terra-Tires. Immobilized on 1st pass.

Fig. 29. M151 with 9.00-14 smooth tires. Immobilized on 1st pass.

Fig. 30. M151 with 36.00-20 Terra-Tires. Immobilized on 1st pass.

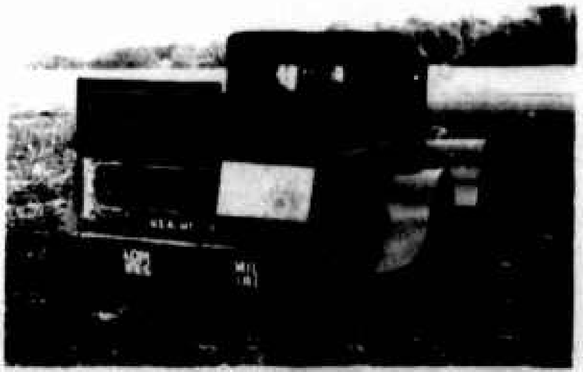


Fig. 31. M37 with 9.00-16 tires. Immobilized on 1st pass.

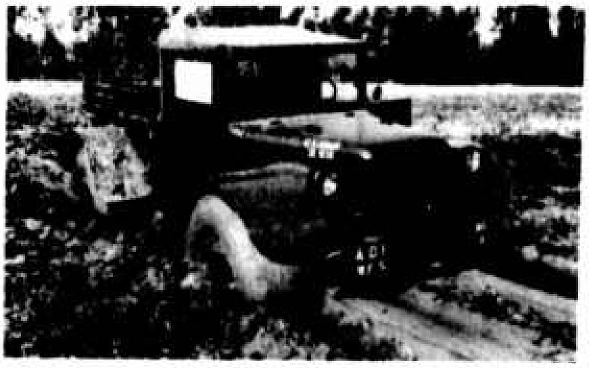


Fig. 32. M37 with 46.00-18 Terra-Tires. Immobilized on 4th pass.

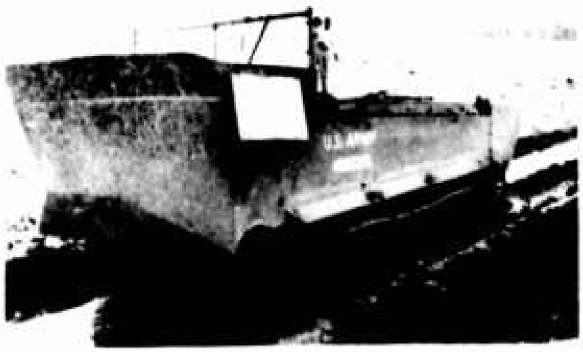


Fig. 33. M29C with 20" tracks. Immobilized on 18th pass.

Fig. 34. "Dinah." Immobilized on 6th pass.

Fig. 35. D4 with 13" tracks. Immobilized on 4th pass.

Fig. 36. D4 with 24" tracks. Immobilized on 3rd pass

Fig. 37. M5A4. Immobilized on 1st pass.

Fig. 38. M116. Immobilized on 6th pass.

TEST SOILS

Major test areas were in two natural terrains having, respectively:

1) a heavy clay soil (CH) (Lake Centennial area), and

2) clayey silt (ML) and silty clay (CL) soils (Grenada Lake, Mississippi).

Gradation curves of these soils, and of those at Fort Stewart and Camp Shelby as well, are given in Figures III-1 to III-4 of Appendix III.

Within each area and soil type, soils having a wide range of soil strengths as measured by cone indices (with and without various degrees of remolding corrections) were utilized. This range was the result primarily of differences in natural moisture content at the time and/or precise place of the tests. Suitable test areas having still other soil types could not be located in the Mississippi area during this program. The tests accordingly were limited to only the two fine-grained soils areas.

TEST PROCEDURES

Field Soil Tests

Procedures and techniques developed in earlier WES investigations [9] were used in measuring soil properties and in collecting samples for laboratory analysis (Figs. 39-42). In addition, the Cohron sheargraph was used to measure surface shear strength of the soils. The manner of its use is given in Reference 5 (Fig. 43).

Self-Propelled Traffic Tests

Self-propelled tests were also conducted in the same general manner as in previous WES 50-pass trafficability programs, except that it was, of course, necessary to select lower soil strength levels in order to obtain one-to-ten-pass immobilizations.

Fig. 39. After-traffic soil measurements in low strength (3-9 layer RCI = 5) soil. Note use of "duck" boards.

Fig. 40. Measurement of soil strength profile (along test lane) with cone penetrometer.

Drawbar Pull Tests

Drawbar tests were run by connecting the test vehicle to a drag vehicle by means of a tow cable and load cell (Fig. 44). Drawbar load was adjusted by adjusting the speed of the drag vehicle (and hence test vehicle slip) while maintaining a constant, nominal test vehicle track or wheel speed of approximately 2 miles per hour. Drawbar pull and, in those vehicles equipped with torquemeters, driveline torque were measured.

Fig. 41. Field party measuring remolding index and collecting moisture/density samples.

During the first program at Lake Centennial, drawbar tests were run by regulating the drag load so that a continuous record of pull was made between no load and the load that caused a test vehicle to slip approximately 100 percent. The drawbar pull record was then examined for maximum pull, and soil data were obtained in the area of occurrence of maximum pull. For these tests slip was not measured. While these first tests were underway, instrumentation to measure slip was assembled and a subsequent series of drawbar tests covered the slip range from 0 to 70 or 80 percent. In these latter tests, both drawbar pull and slip were measured, and it was determined from these that maximum pull in all of the tests occurred at approximately 20 percent slip for wheeled vehicles and 40 percent for tracked vehicles (see Figs. 45 and 46). Subsequent drawbar tests of each vehicle accordingly were run at constant slips of 20 and 40 percent only. This provided approximate maximum pulls for either tracked or wheeled vehicles as well as data for each at the same slip, for direct comparison if desired.

In order to obtain a maximum range of soil strengths at Lake Centennial, test lanes were arranged perpendicular to the water's edge. Constant slip tests toward the water thus provided a record of drawbar pull versus more-or-less continuously decreasing soil strength. This procedure greatly expedited testing, but the vehicle at any instant was, in effect, operating on soil of varying strength throughout its running gear length. Average soil strength values paired with each drawbar measurement thus have a slightly greater uncertainty than might have been attained by tests in more nearly constant conditions. It was considered that the increase in the number of valid data points available more than compensated, statistically, for the probable slight degradation of accuracy of individual points. Moreover, had the tests been run parallel to the water, somewhat the same uncertainty as to soil strength would have existed from one side of the vehicle to the other.

Fig. 42. Measuring after-traffic soil strength in rut created by vehicle.

Surface Traction Tests

Two diked test lanes were prepared on WES grounds, one of a clayey silt and the other of a heavy clay. Preparation consisted of blading and rolling. Both courses were compacted to provide a 0-6-inch CI of 300-plus in order to minimize rutting when trafficked. The surface strength of the two test courses was varied by sprinkling and/or flooding. Surface sheargraph measurements and moisture content samples were taken along each course just before use.

Fig. 43. Sheargraph being used to measure surface shear strength.

Drawbar tests were conducted with three vehicles: the M29C, the M37 4x4 with 9.00-16 tires, and the M38A1 4x4 with 6.00-16 tires. Tests consisted of measuring drawbar pull and torque in each case at 20 and 40 percent slip, to conform to the drawbar determinations made in other parts of the program.

The heavy clay traction course, partly due to the necessity of using fill material and partly due to frequent, heavy rains, was never really uniform in strength in the surface layer, and consistently pro-

Fig. 44. M29C equipped for drawbar test. Note 5th wheel, load cell, and instrument cluster for driver.

duced erratic test results. Tests in the clayey silt traction course produced results of somewhat better quality, but alternate periods of heavy rain and high ambient temperatures (and high drying rate) caused rapid changes in the surface moisture content, and consequently in surface shear strength which, as could be expected, also made for poor control over test conditions.

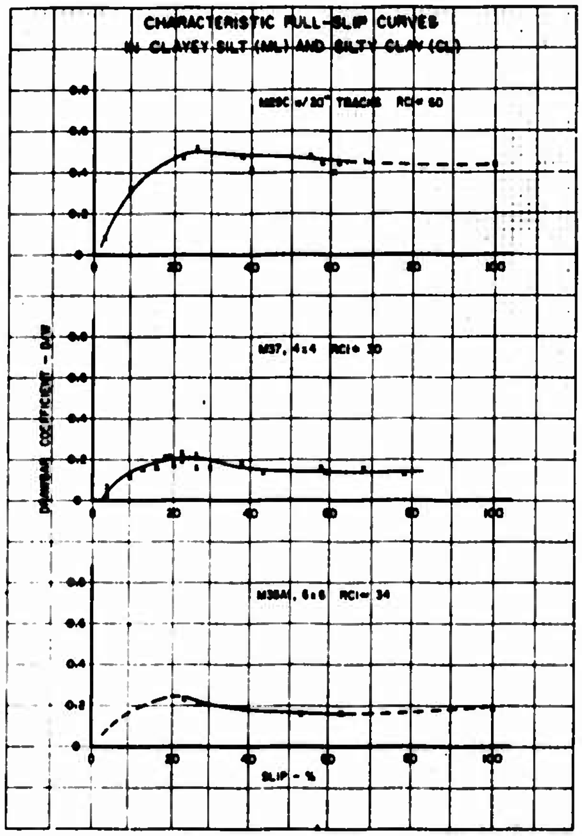


Fig. 46

Speed Tests

Full-throttle speed tests were run on selected vehicles in several soil strengths. Care was taken to insure a long enough run to reach equilibrium. In each test the procedure was to operate the vehicle in a gear which caused the full throttle engine speed (read on a tachometer) to stabilize at a level below the maximum allowable (or the governed speed). Upon reaching a stable speed, a marker was thrown from the vehicle and a stop watch was started. At the end of a fixed time period (5 or 10 seconds) a second marker was thrown and the gear position, engine speed, distance traveled, and elapsed time were recorded. Insofar as possible, these tests were made along a test lane selected to have a reasonably uniform strength throughout its lengt The results

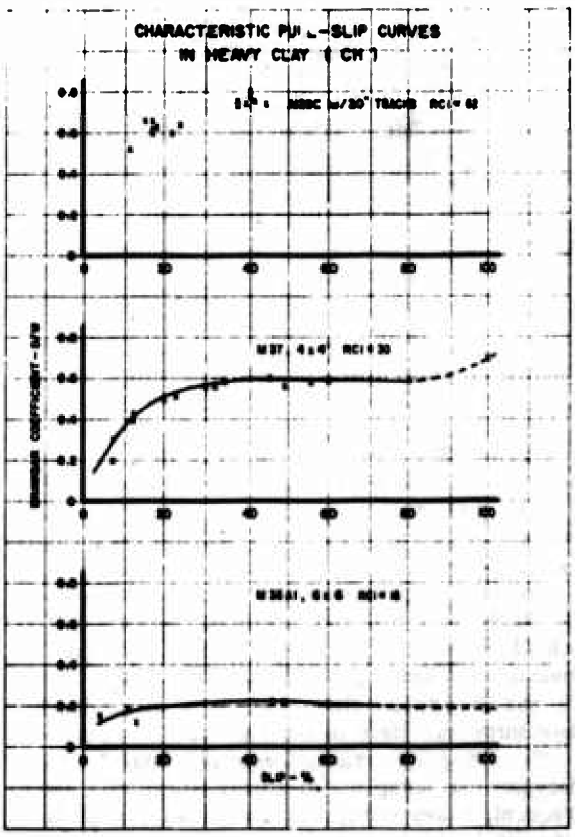


Fig. 45

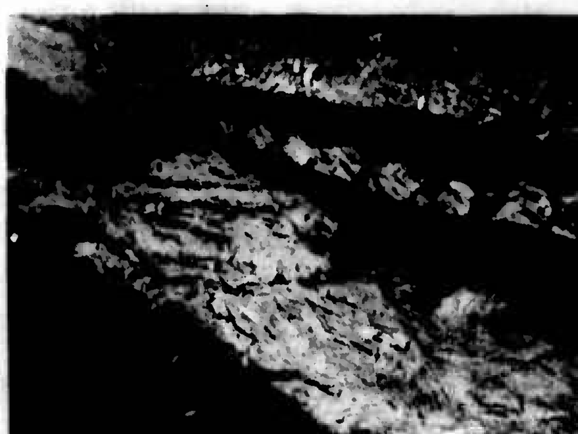


Fig. 47. Accumulation of soil in running gear of M29C.

Fig. 48. Accumulation of soil on articulated steering mechanism of Dinah.

Fig. 49. Polecat undergoing maneuver tests. M29C on left is instrumentation vehicle.

were markedly influenced by the amount of soil accumulated in the running gear of the vehicle before and/or during the course of the run (Figs. 47-48).

Maneuver Tests

For each of the basic vehicles, torque was measured via propeller shaft torquemeters while operating in soils of various strength when proceeding in a straight line; on one or more fixed radii less than minimum; and on the minimum radius of which each is capable (Fig. 49). The tests were conducted in lanes of various radii established to provide, again insofar as possible, uniform soil strength. The test vehicle was operated in its lowest gear at an engine speed giving a nominal forward speed of 2 miles per hour. Torque, engine speed, slip, rut width, rut depth, and soil strength were measured and recorded. As in the speed tests, problems of soil uniformity and soil accumulation in the running gear were encountered. Both problems were exaggerated by the curved path.

INSTRUMENTATION

Electronic transducers and event markers were used to obtain continuous measurements of engine speed, wheel or track speed and slip, driveline torque, drawbar pull, distance traveled, and elapsed time. These were recorded on a vehicle-mounted 10-channel oscillographic recorder with associated amplifiers (Fig. 50). The 110-volt, a. c. voltage required was obtained from an engine-driven generator mounted on the instrumentation vehicle.

Drawbar pull was measured by a commercial strain-gaged load cell connected, via tow cable, between the test and the drag vehicles (Fig. 51).

Engine/driveline rotations were counted by a cam-actuated microswitch attached to the speedometer take-off on the vehicle transmission and were recorded on the oscillograph as a series of event marks. A second cam-actuated microswitch mounted on a trailing fifth wheel gave a similar record of distance traveled by the fifth wheel. Pretest calibration on a hard surface provided values of distance traveled per "pip" for each of these event marks. Comparison of event marks with each other and with the timing lines, recorded continuously on the chart, permitted ready calculation of slip and various speeds in the system.

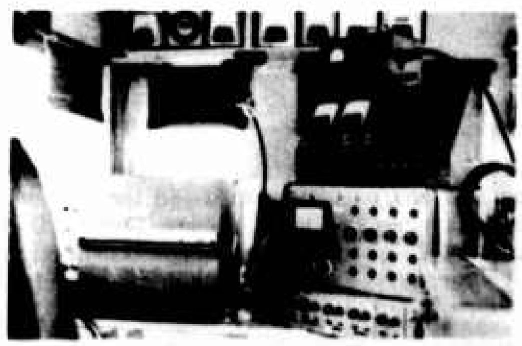


Fig. 50. View inside instrumentation vehicle showing arrangement of recorders, amplifiers, etc.

The fifth wheel was also equipped with a d.c. generator whose voltage output was linearly proportional to speed. This drove a meter calibrated, for each of the test vehicles, directly in percent slip. The meter was used by the drag vehicle operator

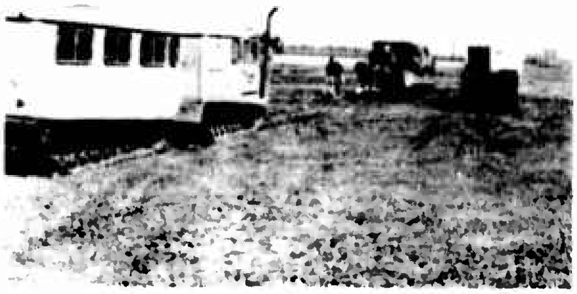


Fig. 51. M29C undergoing drawbar pull tests at Grenada Lake test site.

in regulating his throttle to provide the approximate desired slip during a test.

Each test vehicle was equipped with an electric tachometer by means of which the driver was able to adjust the engine speed to produce a traction element speed (relative to the vehicle) of approximately 2 miles per hour.

Several of the test vehicles were equipped with commercial driveline torquemeters, with which drive shaft torque was continuously measured and recorded during maneuver and drawbar tests (Fig. 52).

Fig. 52. M29C drive shaft torquemeter.

A manually operated switch, connected to an event marker in the recorder, was used to indicate on the oscillograph, for later coordination with other logged data, occurrences such as passing a test lane marker, crossing an obstacle or old ruts in the test lane, or other observable conditions likely to produce erratic results.

A major component of the instrumentation package was the intercommunication system, by means of which the drivers of the test and drag vehicles, the instrument operator, and the test engineer maintained constant voice contact. The system used was one in which all stations were "open" in order that the personnel involved might have free use of both hands during the test operation.

TEST RESULTS

The complete data from all vehicle field test programs and supporting field soil tests are tabulated in Appendix III in Tables III-3 to III-50. Tables III-3 through III-48 are print-outs of the data as concurrently reduced to punched-card form by WES for their own future reference. The coding used is fully explained in Tables III-1 and III-2, immediately preceding. The test location code is given in the location maps, Figures III-5 and III-6 of Appendix III.

ANALYSES

Because of their semi-empiric nature, the analyses, as they developed, did not follow the original outline in detail. The emerging data altered the order of precedence of some factors originally proposed. In other cases the data did not have the precision needed to treat some of the secondary effects contemplated in the original program. In still others, complex factors which were not amenable to treatment within the present time frame, such as the soil/vehicle relationships governing the loading-up of suspension in sticky soils, proved to have effects upon measurements, such as speed, which tended to mask the effects of the basic mass soil-strength variable. Continuing exposure to the on-going, related work on soil/vehicle relationships of other persons and/or organizations also provided new insights.

Problem 1. Basic First-Pass Trafficability Criteria

The crux of the study lay in unraveling from the data a rational, workable soil strength index. The pattern and progress of such a semi-empiric process is often orderly only in retrospect. This is a retrospective account.

The data available for the determination of a first-pass trafficability criterion consist of:

1) Measured drawbar pull maxima for 14 vehicles and/or load conditions in two soil types, each at several strengths characterized by measured cone penetrometer profiles and standard remolding index determinations;* and

2) number of passes completed in the same ruts (traffic tests) for 45 vehicle configurations (36 from present tests, nine from past) in several soils, again of various strengths as recorded by standard WES cone penetrometer procedures.

The basic approach in analyzing these data was to treat the two performance parameters for all vehicles (maximum drawbar pull in the pull-slip tests, passes completed in the self-propelled traffic tests) as independent, single-valued monotonic functions of a given soil strength index. Several different soil strength indices, all derived by manipulation of the corresponding cone penetrometer and remolding measurements, were tried. A curve of visual best-fit was drawn and extended as necessary to obtain an intercept at zero drawbar pull or one-pass completed, as appropriate. The intercept value from a given exercise was taken as the estimate of VCI_1 for the vehicle, type of test (drawbar or traffic), and structure of soil strength index involved. Where both drawbar and traffic test data were available on a vehicle, the two plots (maximum drawbar pull and passes completed) were made on a common soil strength index base, and the assumption made in fitting the two curves that they should have the same intercept; i.e., that when the soil strength is just sufficient to support one pass of a vehicle there is no excess of drawbar pull, and vice versa* (see Figure 84, for example). The exercise was repeated for various reasonable configurations of the strength index in terms of

1) averages of measured cone indices in soil layers of several thicknesses, at several depths in the soil (6-12", 0-18", etc.), each modified by

2) the application of various percentages of the total reduction in strength due to remolding determined by the standard WES method.

A computerized manipulation of the data was set up and conducted under a subcontract by the Davidson Laboratory, Stevens Institute of Technology [7]. In this program the many computations for various forms of index were carried out, a least-mean squares best-fit made for each form, the corresponding intercepts obtained, and several simple statistical measures of "goodness of fit" calculated. The form of the curve fit to the drawbar data, selected after a review of available theoretical and laboratory results [6], was

$$D/W = K_1 - K_2/CI'$$

where D/W = drawbar pull/gross vehicle weight

and CI' = the soil strength index

*During the spring of 1964, WES altered their standard cone penetrometer from one having a 5/8-inch diameter shaft to one having a 3/8-inch diameter shaft. It was desired to express the results of this study in terms of measurements of the new standard instruments. It was therefore necessary to "correct" some of the earlier data. For this purpose, simple approximate relationships were developed experimentally during the remainder of the program (Appendix V).

*Note that a vehicle operating in fine-grained soil of the absolute minimum strength in which it will continue to function will, in general, be proceeding with considerable slip. The zero-pull point will, accordingly, be a true member of the 20-40 percent slip -- or maximum DBP -- data family in this case, even though this is not necessarily so in the case of multipass trafficability.

In the absence of any theoretical considerations, a linear relationship between passes completed (P) and strength was arbitrarily used, as follows:

$$(P) = K(CI' - CI_0'),$$

The thought was implicit in the overall treatment that that configuration of the basic cone penetrometer data which most reduced "scatter" in the performance/strength relationships would probably be the most useful and "correct." However, despite its arithmetic and logical complexity when reduced to a rigorous, objective, decision-making procedure, the program proved too naive. It did not provide for elements of selection and judgment actually utilized in less-formalized, subjective handling of the data. Its results showed no useful consistency, and proved to confuse rather than clarify the picture. No doubt a more sophisticated program could be developed which would perform better. However, neither time nor funds nor experience encouraged further work along these lines at this time.

A rapid, manual reassessment of a broader range of possibilities in handling the data than encompassed in the computer approach, and using more complex judgment bases, was subsequently undertaken. During this period the WES laboratory test work on tires in sand and clay, which had been underway for several years, matured and was consolidated by Freitag [2]. His synthesis, taken with trends which were emerging in the on-going treatment of the field data and with considerable general background on vehicle-soils relationships, suggested a rational and potentially more general approach to the critical problem of selecting an appropriate layer within the soil mass over which to average the measured cone indices (with or without some degree of remolding correction). The reasoning involved is detailed in Appendix II. From this it was decided to try layer rules for tires and tracks as follows:

tires--surface to a depth = $\sqrt{bd\Delta}$

tracks--surface to depth = b_t

where
- b = undeflected tire section width
- d = undeflected tire outside diameter
- Δ = tire deflection ratio = δ/h
- δ = radial deflection of tire on a hard surface, under test load and at test inflation
- h = section height over rim flange = $0.5(d - d_{rf})$
- d_{rf} = wheel diameter over rim flange

and b_t = track width.

The computer results demonstrated that selection of a proper remolding adjustment required *simultaneous* consideration of soil types of significantly different sensitivity. The Lake Centennial (CH) and Grenada Lake (CL and ML) data were used for the purpose.*

Finally, a review was made of the abundant, simple, but largely unsubstantiated theoretical treatments of vehicle/soil relationships published over the past 20 years, to establish a general form of the relationship to be expected between the minimum soil strength at which a given vehicle may operate (on a steady, straight, level course) and the basic characteristics of that vehicle. (In cone index -- RCI_1 -- terms, this minimum strength defines the vehicle cone index, VCI_1.) The result, as developed in Appendix I, is, unremarkably, that for either wheeled or tracked vehicles

$$VCI_1 = Kq_n \quad (1)$$

where q_n = nominal unit ground pressure of the vehicle.

For tracked vehicles

$$q_n = W_1/b_t L \ , \quad (2)$$

and for wheeled vehicles

$$q_n = W_1/br \quad (3)$$

where
- W_1 = the gross load on a single tire or track, lb
- L = nominal contact length of a track on hard ground, in.

and r = undeflected tire outside radius, in.

This consideration was incorporated as part of the value judgment in assessing the probable validity of various layer-rule/remolding treatments of the soil data.

The major results applicable to one-pass soil trafficability criteria are as follows:

1. $\underline{RCI_1}$: Based upon analyses of the data in CH and CL and ML soils, along the lines discussed, the following definition for RCI_1 is proposed:

$$RCI_1 = \frac{1}{z_0}\int_0^{z_0} (CI \times RI_1)dz \ ; \quad (4)$$

where
- CI = cone index measured at depth z
- RI_1 = the remolding correction = $0.5(1+RI)$

*Vehicle immobilizations during tests at Camp Shelby and Fort Stewart in silty sands upon perched water tables appeared to be qualitatively different from those in the fine-grained soils, suggesting that pore water behavior may play a significant role in this situation. In any event, the data from the Camp Shelby and Fort Stewart tests did not lend themselves to the above analysis and accordingly were not pooled with the fine-grained soil tests in these analyses. The soil type involved is important and deserves further study, however.

RI = the standard WES remolding index [3]

and $z_0 = \sqrt{5d\Delta}$ for wheeled vehicles

or $z_0 = b_t$ for tracked vehicles

i.e., RCI_1 is the average cone index, corrected for remolding effects, from the surface to the depth, z_0, defined. z_0 is taken to the nearest 3-inch increment, consistent with current WES 50-pass trafficability measurement procedures, and RI is measured for each 6-inch layer and applied to the corresponding measured cone indices.

Since remolding indices were usually measured for 6-inch layers only, the following equations, which assume a linear relationship between soil strength and depth, were used to compute RCI for depths which were not multiples of 6 inches.

$$RCI_1(0\text{-}9) = 3/4\ RCI_1(0\text{-}6) + 1/4\ RCI_1(6\text{-}12)$$

$$RCI_1(0\text{-}15) = 1/4\ RCI_1(0\text{-}6) + 3/4\ RCI_1(6\text{-}12)$$

Based upon 50-pass trafficability experience, cone index profiles were in many cases taken to a depth of only 18 inches. Where this occurred, and an average to a deeper depth was called for, the following equations were used to extrapolate the measured data (again linearly):

$$RCI_1(0\text{-}21) = 3/4\ RCI_1(6\text{-}12) + 1/4\ RCI_1(12\text{-}18)$$

$$RCI_1(0\text{-}24) = 1/2\ RCI_1(6\text{-}12) + 1/2\ RCI_1(12\text{-}18)$$

2. $\underline{VCI_1}$: Plots of the total fine-grained vehicle/soil test data treated in this manner are shown in Appendix IV, Figures IV-1-IV-6 for wheeled vehicles and Figures IV-7-IV-10 for tracked vehicles tested under this program. Those past WES tests for which adequate data for this new analysis were available are plotted in Figures IV-11-IV-13 of Appendix IV. The intercepts from these plots which define VCI_1 on a passes-completed basis and, where available, also on a drawbar pull basis, are tabulated in Tables 3 and 4, and the VCI_1's from pass data only are plotted in Figures 53 and 54.

From Figures 53 and 54,

$$VCI_1 \approx 3\ q_n \quad \text{for tires} \quad (5)$$

$$\text{and } VCI_1 \approx 2.5\ q_n + 4 \quad \text{for tracks.} \quad (6)$$

A conservative upper bound for each case, as shown, might be

$$VCI_1 = 3\ q_n + 3 \quad \text{for tires} \quad (7)$$

$$VCI_1 = 3\ q_n + 6 \quad \text{for tracks.} \quad (8)$$

As shown in Table 3, the agreement between VCI_1 as estimated from passes-completed data and as estimated from drawbar tests, is good except for the tracked M116 at 8435 pounds, and the wheeled M35A1 6x6 at 13 psi tire inflation. As will be discussed in the next section, first-pass performance is far more sensitive to departures in surface soil shear strength from a norm associated with the mass shear strength which provides bearing capacity than is 50-pass trafficibility. It is possible that this accounts for such discrepancies, as well as for much of the scatter apparent in Figures 53 and 54. No attempt was made to "correct" the data for such effects, although means of accounting for them are suggested by the next section. Any further program should be designed to attempt this, however.

3. <u>An alternate "layer rule" (not recommended):</u> During the search for synthesis, numerous other reasonable appearing layer/remolding rules were tried. Among these the following produced the most consistent results:

$$RCI_1' = \frac{1}{6}\int_{z_1}^{z_2} (CI \times RI_1)dz \qquad (9)$$

where RI_1 is defined as before and the layer ($z_1 - z_2$) is a function of nominal unit ground pressure (q_n) as given below:

qn	Layer
0-3 psi	0-6"
3-6	3-9"
6-9	6-12"
9-12	9-15"
12-15	12-18"

The current data, treated as before, produced the VCI_1 estimates given in Table 5, and plotted versus qn in Figure 55. From Figure 55, for *both* wheeled and tracked vehicles,

$$VCI_1 \approx 2.3\ q_n + 2 \qquad (10)$$

and a conservative upper bound might be

$$VCI_1' = 2.3\ q_n + 5\ . \qquad (11)$$

As will be seen in Table 5, with this treatment of the cone data there are no serious discrepancies for any of the vehicles between VCI_1 as determined by pass data and drawbar tests. The fact that wheeled and tracked vehicle results fall into the same, reasonably narrow, scatter band is also suggestive. However, the use of a pressure to estimate the depth to which the soil mass may be actively involved in the continuous failure which is rutting is unacceptable on fundamental grounds. Hence the generality of the demonstrated relationship is more questionable than those, such as developed in the paragraph just preceding, which depend upon a layer rule related to the geometry of the loading system. The first proposal is thus to be preferred.

Problem 2a. Prediction of Drawbar Pull and Gradeability

The maximum drawbar pull (D) of a vehicle in a given soil bed is generally treated as the difference between maximum traction (T) developable by its running gear in the soil it is engaging, and the sum of the external motion resistances (R_e) offered by the soil body as the vehicle passes over and through it. Reduced to dimensionless form, this becomes

TABLE 3

VCI_1 FROM NEW DATA USING $(0\text{-}Z_0)$ LAYER

Wheeled Vehicles	GVW lb	Tires	Infl. Press. psi	q_n	Key	VCI_1 Pass Data	VCI_1 BP Data
					Fig. 53		
M151	3,560	36.00-20 TT	3	2.3	1	8	
			15	2.3	2	7	
M274	1,325	16.00-15 TT	3	2.5	3	7	
			15	2.5	4	8	
	1,190	7.50-10	5	3.1	5	7	
			10	3.1	6	10	
			30	3.1	7	11	
	1,940	16.00-15 TT	3	3.7	8	11	
			15	3.7	9	11	
M37	7,240	46.00-18 TT	3	3.8	10	11	
			15	3.8	11	13	13
M274	1,940	7.50-10	5	5.1	12	15	
			10	5.1	13	17	
			30	5.1	14	15	
M151	3,560	9.00-14	20	7.9	15	27	
			30	7.9	16	22	
	3,560	7.00-16	15	8.8	17	25	
			30	8.8	18	27	
M37	7,240	9.00-16	6.5	10.8	19	25	20
				10.8	20	33	33
				10.8	21	30	30
M35A1	19,410	11.00-20	13	13.3	22	37	25
			35.5	13.3	23	40	
Tracked Vehicles		**Track Width, in.**			Fig. 54		
Dinah	4,095	20		1.3	1	6	
	4,975	20		1.6	2	7	
Weasel	4,960	20		1.6	3	8	4
	5,960	20		1.9	4	8	12
M116	8,435	20		2.0	5	10	20
Polecat	12,580	20		2.0	6	10	9
M116	10,610	20		2.6	7	12	12
Weasel	5,960	12		3.2	8	8	10
D-4	13,585	24		4.6	9	16	16
M56	15,995	20		4.7	10	20	
D-4	12,420	13		7.8	11	17	
D-4	14,870	13		9.2	12	25	
M-5A4	28,350	17.1		7.1	13	26	

TABLE 4

VCI_1 FROM PREVIOUS DATA USING (0-Z_0) LAYER

Wheeled Vehicles	GVW lb	Tires	Infl. Press. psi	q_n	Key	VCI_1 (from Pass Data)
					Fig. 53	
M151	3,430	36.00-20 TT	5	2.2	A	24
M274	1,260	7.50-10	10	3.3	B	12
CV-8, 1T Truck	8,890	46.00-24 TT	10	4.0	C	30
Jeep Utility Wagon	3,650	7.00-15	30	8.0	D	25
M37	5,925	9.00-16	30	8.9	E	25
Michigan Payloader	13,815	14.00-24	30	9.5	F	32
M37	7,425	9.00-16	30	11.1	G	35
XM-438E2, Goer	38,310	29.50-20	15	12.1	H	40
WWII 2-1/2T Truck	16,300	10.50-18	5	15.0	J	43
Tracked Vehicles		Track Width, in.			Fig. 54	
M24, Lt. Tank	36,800	16		11.30	A	34

$$D/W = T/W - R_s/W \tag{12}$$

where W = gross vehicle weight.

Thus drawbar pull is a composite response. The two more fundamental performance factors which make it up do not necessarily have the same form of relationship to measured soil strength. Moreover, traction generally will involve soil only in close proximity to the running gear, while many components of the resistance force are generated in the process of mobilizing the bearing capacity which supports the vehicle weight, and hence reflect soil behavior and properties throughout the soil body up to considerable distances from the mechanical soil-vehicle interface.

Use of a simple soil strength index in this situation, and hence in any limiting one-pass performance prediction, thus implies that that index reflects the soil strength both in terms of direct shear, and in terms of bearing capacity. It also implies expectation of a high degree of simple regularity in normal strength profiles throughout the soil depth involved in the total system. These are two independent problems.

Treating the question of profile regularity first, it is evident that, except under controlled conditions, as in the laboratory, any more than a crude similarity in profiles cannot be expected. Even the gross linearization of the profile suggested in Figures II-4 and II-5 of Appendix II requires two independent parameters to define it properly. Replacing these by an average throughout a depth related to the size of the system, as in the "critical layer" rule just proposed, is conceptually adequate to approximate the response of the soil body to bearing loads. It can only serve the same function for tractive loads if the strength of surface layers is some fixed proportion of the average. Even in the same soil body, this proportion can not be entirely fixed for averages taken to various depths except when the surface strength is effectively zero, or the strength is essentially invariant with depth over the range of depths of interest. Thus, for drawbar pull prediction*

*Strictly speaking, of course, the minimum supporting soil strength required for a single self-propelled pass -- VCI_1 -- is also affected by surface shear strength, for it is simply the zero drawbar-pull case. Much of the scatter in the test results as presented in the preceding section is probably due to variations in surface strength from the chance norm in which the tests were run. The methods developed in this section, applied to these other data, would presumably refine the results to a useful degree. Unfortunately, exhaustion of project time and funds prevented this third cycle of analysis at this time.

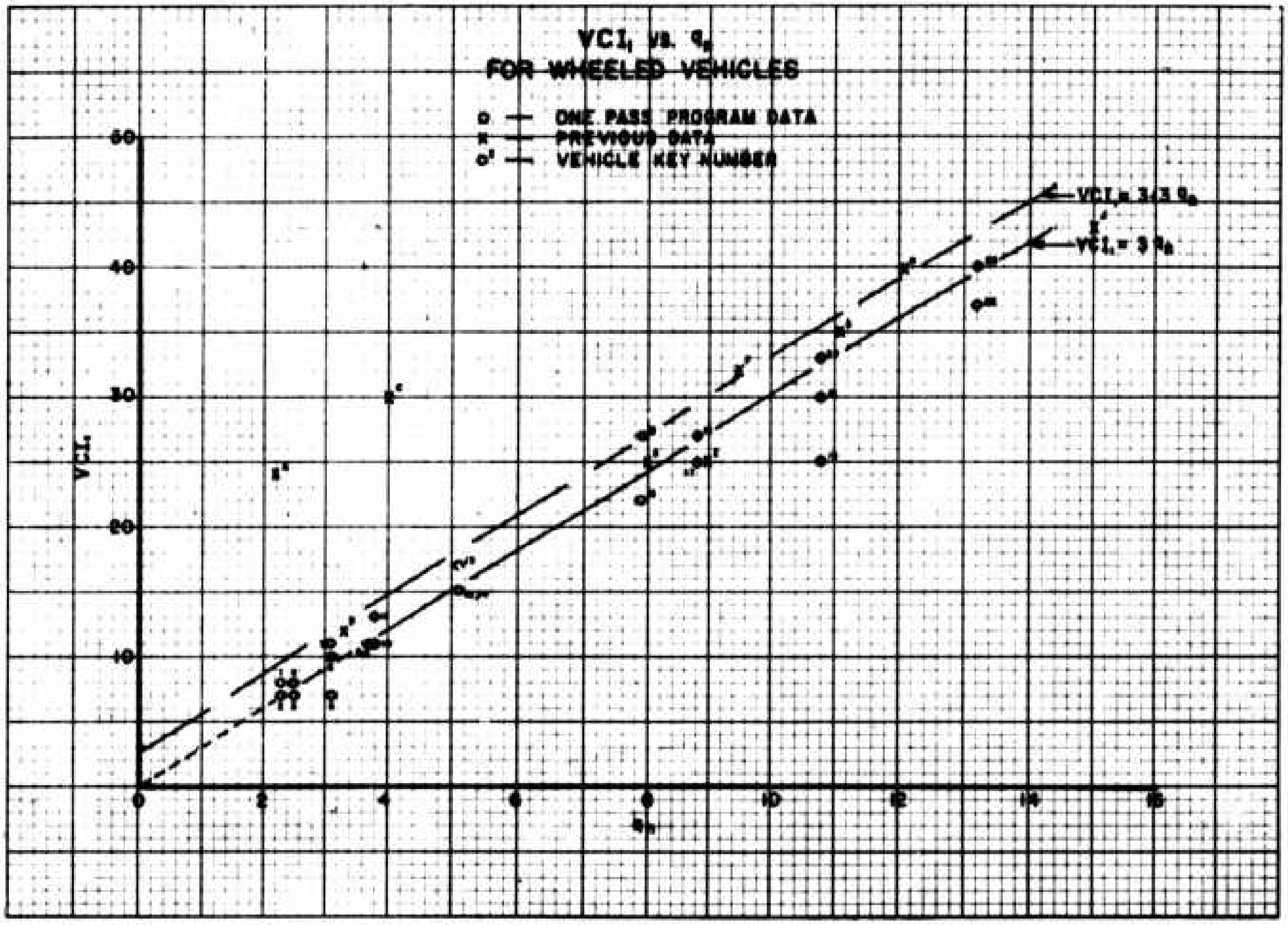


Fig. 53

a second strength parameter is necessary in addition to that reflecting bearing capacity.

Beginning with Micklethwait [10] and Nichols [11] it has been generally accepted that maximum traction may be approximated essentially by the simple application of Coulomb's equation

$$\tau = c + \sigma \tan \phi \qquad (13)$$

where τ = soil unit shear strength
c = apparent soil cohesion
ϕ = apparent soil angle of internal friction
and σ = unit normal loading,

by selecting the appropriate contact area (and corresponding nominal normal pressure). The requisite value of t, or of c and ϕ, conceptually may be obtained by means of *in situ* direct shear measurements. The Cohron sheargraph [5], a small, manual torsion shear device, compatible in its portability with the standard WES soil trafficability equipment [12], was used in this program in an attempt to obtain these values in the field.

The outcome is discussed in Appendix VI. In general, the sheargraph gave results which showed the proper trends, but detailed correlation with measured vehicle performance, in accordance with equation [13], proved elusive. In this circumstance, a cruder approach was taken in which the sheargraph measurements were reduced to an index

$$(\tau/\sigma)_{10}$$

where τ was evaluated from the records at a nominal σ of 10 psi. This index appeared to correlate reasonably well with results from tests (the "slipperiness" tests) in which measured vehicle pull could be presumed to be traction only; i.e., in tests where the main soil body was so strong ($RCI_1 \geq 300$) that external motion resistance was nil.

This index was next correlated approximately with cone index, using field data from this program, and data from two WES laboratory programs [Smith 13, Meyer 14] which became available as this study concluded (Appendix VI). The relationship for nine different fine-grained soils appeared to be given to a useful accuracy by the exponential decay expression.

$$(\tau/\sigma)_{10} = 1 - e^{-K_2 \cdot CI} \qquad (14)$$

where K_2 was a soil constant varying between about 0.01 and 0.03, and having the dimensions (psi) $^{-1}$. This suggested that the sheargraph, or any similar second instrument, might be eliminated from future field soil test procedures.

Equation (14) made it evident that, conceptually, at least, the cone index of the surface layer (say

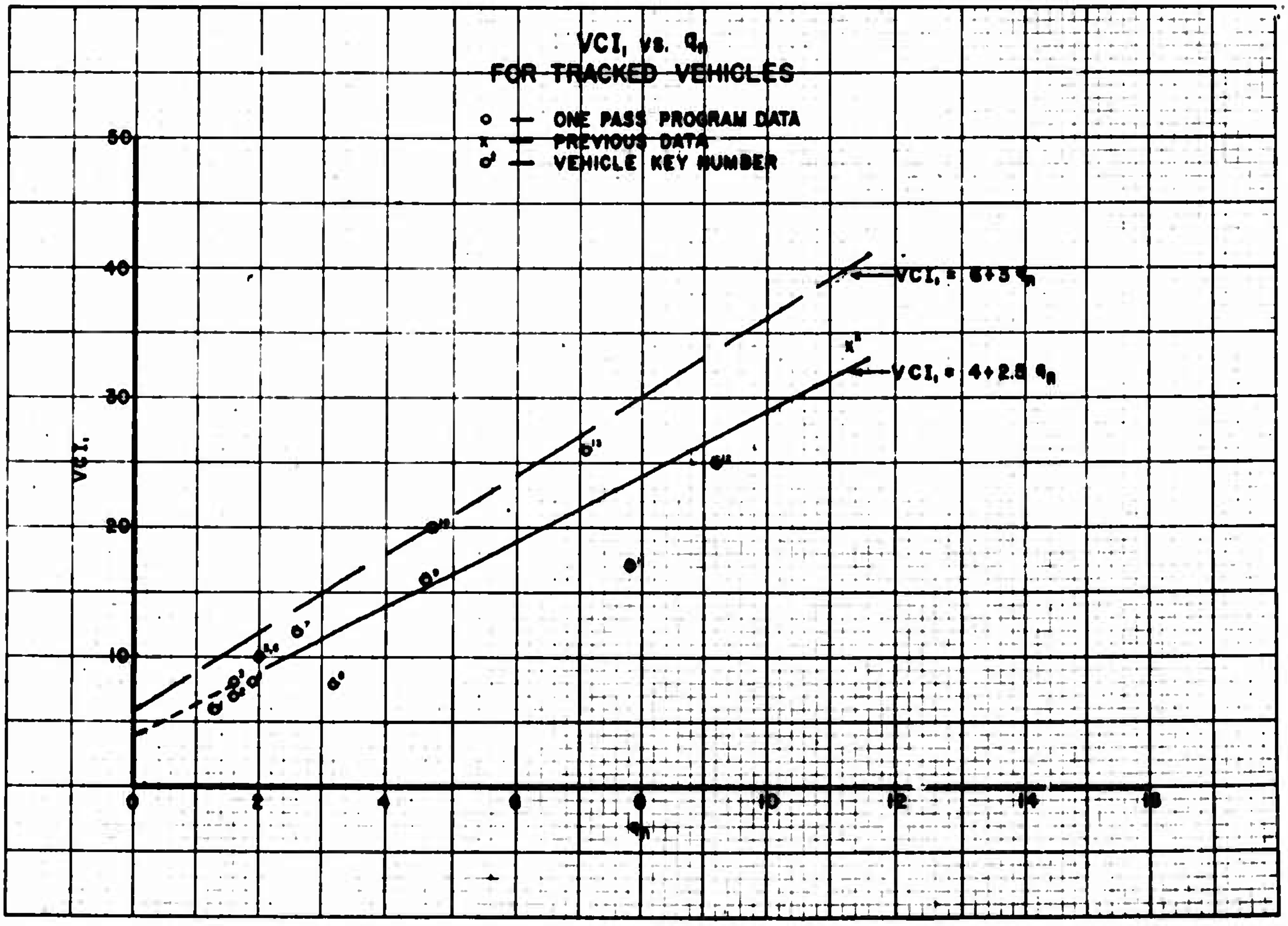


Fig. 54

0-1-inch average)* could be used as the second parameter needed to specify soil strength for drawbar pull prediction. Upon further consideration of the entire problem, including the range of soil strengths of practical interest to reasonably mobile military vehicles, and the quantity and quality of available data, it was decided to use a simple linear assumption in place of equation (14), as follows:

$$(\tau/\sigma)_{10} = K_4(CI) \qquad (15)$$

truncated conservatively at

$$(\tau/\sigma)_{10} = 0.8 \, . \qquad (16)$$

In order to relate this index specifically to traction (T/W) and to vehicle characteristics, it was assumed that, for the weak, fine-grained soils of interest, the surface shear strength it represented was essentially cohesive. In this case

$$T/W = c/q_n \, . \qquad (17)$$

By equations (5) and (6)

$$q_n \approx 1/3 \; VCI_1 \qquad (18)$$

and from plasticity theory (*cf.* Drücker [15]) and from laboratory investigations by Evans [16] and Smith [17]:

$$c \approx K' \; (CI) \qquad (19)$$

Combining equations (15), (17), (18), (19), and a grain of salt,

$$T/W \approx K \; (RCI_1/VCI_1) \, . \qquad (20)$$

Having thus temporarily established a crude but convenient handle on the traction part of the basic equation (12), attention was turned to the motion resistance term, R_s/W. Consideration of several theoretical approaches (see Appendix I), of Freitag's consolidation of WES laboratory data on tires [2], and of driveline torque measurements made as part of the present program, led to the study of the following, compatible general form for this term:

$$R_s/W = K_R \; (VCI_1/RCI_1)^m \, . \qquad (21)$$

By definition, a vehicle operating in soil such that

$$RCI_1 = VCI_1$$

has no margin for drawbar pull; i.e.,

$$D/W = 0.$$

*As a result of concurrent WES laboratory tests to study soil "slipperiness," Smith [14] also suggested use of the 0-1-inch cone index to characterize surface shear strength.

TABLE 5

VCI_1 FROM NEW DATA USING (Z_1-Z_2) LAYER

Wheeled Vehicles	GVW lb	Tires	Infl. Press. psi	q_n	VCI_1 Pass Data	VCI_1 DBP Data
M151	3,560	36.00-20 TT	3	2.3	9	
			15	2.3	8	
M274	1,325	16.00-15 TT	3	2.5	8	
			15	2.5	8	
	1,190	7.50-10	5	3.1	5	
			10	3.1	5	
			30	3.1	6	
	1,940	16.00-15 TT	3	3.7	8	
			15	3.7	8	
M37	7,240	46.00-18 TT	3	3.8	9	9
			15	3.8	11	12
M274	1,940	7.50-10	5	5.1	9	
			10	5.1	11	
			30	5.1	9	
M151	3,560	9.00-14	20	7.9	17	
			30	7.9	17	
	3,560	7.00-16	15	8.8	28	
			30	8.8	23	
M37	7,240	9.00-16	6.5	10.8	25	26
			15	10.8	26	
			30	10.8	25	
M35A1	19,410	11.00-20	13	13.3	33	33
			35.5	13.3	34	
Tracked Vehicles		**Track Width, in.**				
Dinah	4,095	20		1.3	7	
	4,975	20		1.6	8	
Weasel	4,960	20		1.6	6	6
	5,960	20		1.9	6	8
M116	8,435	20		2.0	8	13
Polecat	12,580	20		2.0	7	7
M116	10,610	20		2.6	9	9
Weasel	5,960	12		3.2	9	10
D-4	13,585	24		4.6	13	11
M56	15,995	20		4.7	13	
D-4	12,420	13		7.8	16	
D-4	14,870	13		9.2	25	
M-5A4	28,350	17.1		7.1	20	

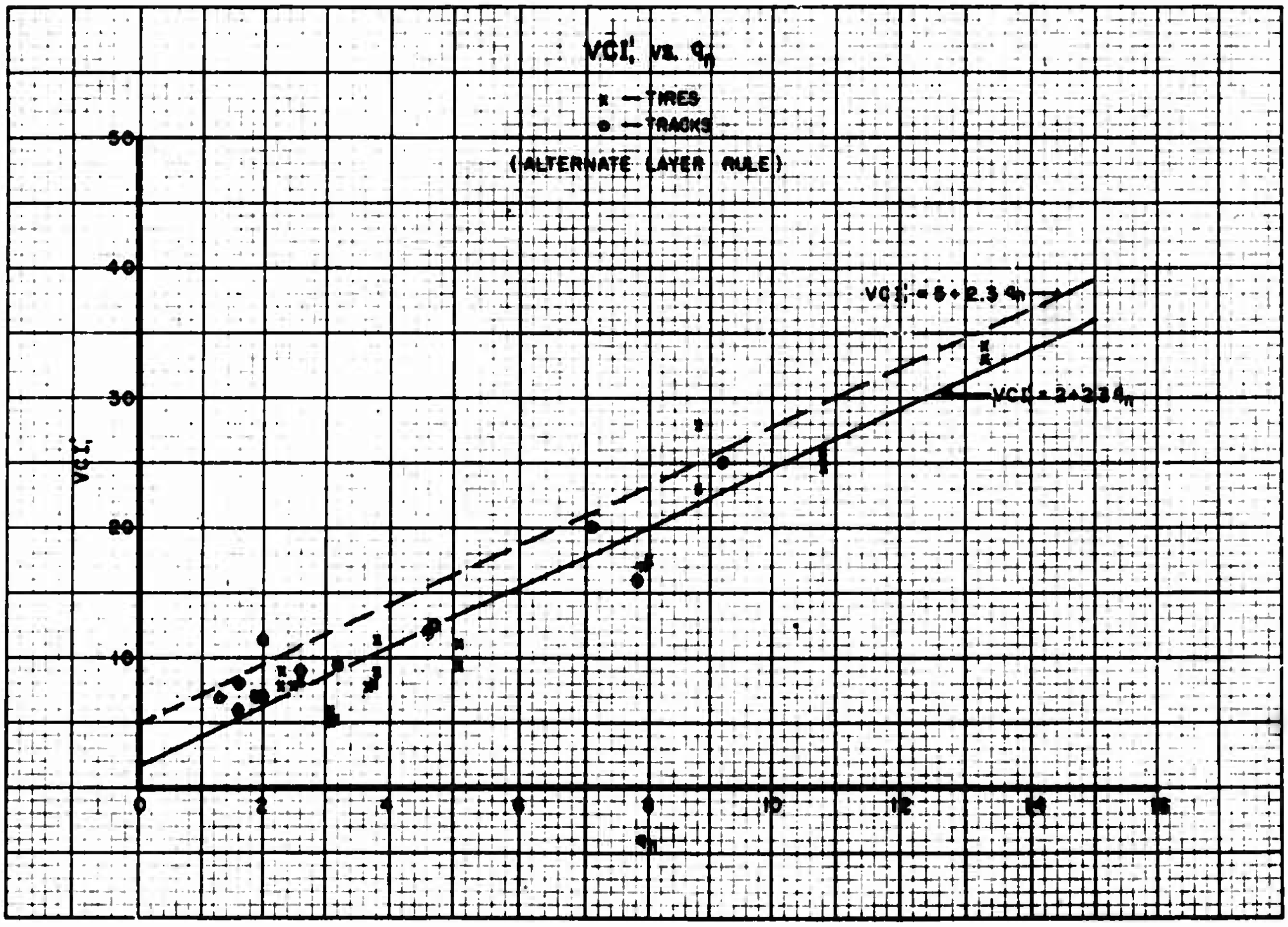


Fig. 55

By equation (12), then, when $RCI_1 = VCI_1$

$$T/W = R_s/W \qquad (22)$$

and, therefore, from equations (20) and (21),

$$K_R = K \qquad (23)$$

Equation (12) may thus be written

$$D/W = K\left[\frac{RCI_1}{VCI_1} - \left(\frac{VCI_1}{RCI_1}\right)^m\right]. \qquad (24)$$

Note that in utilizing equation (20) in this development, the truncation suggested in equation (16) is implied. Thus in strong soils where $R/W \doteq 0$ (i.e., where $RCI_1/VCI_1 \leq 0.8/K$)

$$D/W = 0.8 \qquad (25)$$

It is implicit in equation (24) that soil strength is essentially constant from the surface to a considerable depth, so that RCI_1 characterizes both bearing capacity and surface shear strength. In order to generalize to the case where this is not true, the factor

$$K_\tau = \frac{RCI_{1,s}}{RCI_1} \qquad (26)$$

where $RCI_{1,s}$ = the one-pass remolded cone index for a surface layer of s inches

may be introduced, as follows:

$$D/W = K\left[K_\tau \frac{RCI_1}{VCI_1} - \left(\frac{VCI_1}{RCI_1}\right)^m\right]. \qquad (27)$$

Data from field tests of two wheeled and three tracked vehicles, in which maximum drawbar pull, driveline torque, and soil strength were concurrently obtained, were analyzed to develop estimates for K and m. Measured torques during tests in field soil conditions were converted to equivalent hard surface drawbar pulls, using an experimental curve for each vehicle developed for this purpose. The difference between measured drawbar pull in the soil and the expected hard surface pull was taken as the gross motion resistance due to operating in the soil. This figure includes both external motion resistance, R_s, and a pseudo resistance force from internal losses, such as arise from sticking soil clogging suspension, increasing sprocket losses, etc. The latter component requires extra engine torque (and hence is sensed by a driveline torquemeter), but not extra traction, and is a function of a number of design features largely unrelated to either vehicle traction or flotation characteristics.

Values for gross resistance (R/W) are plotted versus (VCI_1/RCI_1), for wheeled vehicles in Figure 56, and for tracked vehicles in Figure 57. Using these data plots and a little imagination, values for K and m in equation (21) were selected, giving for

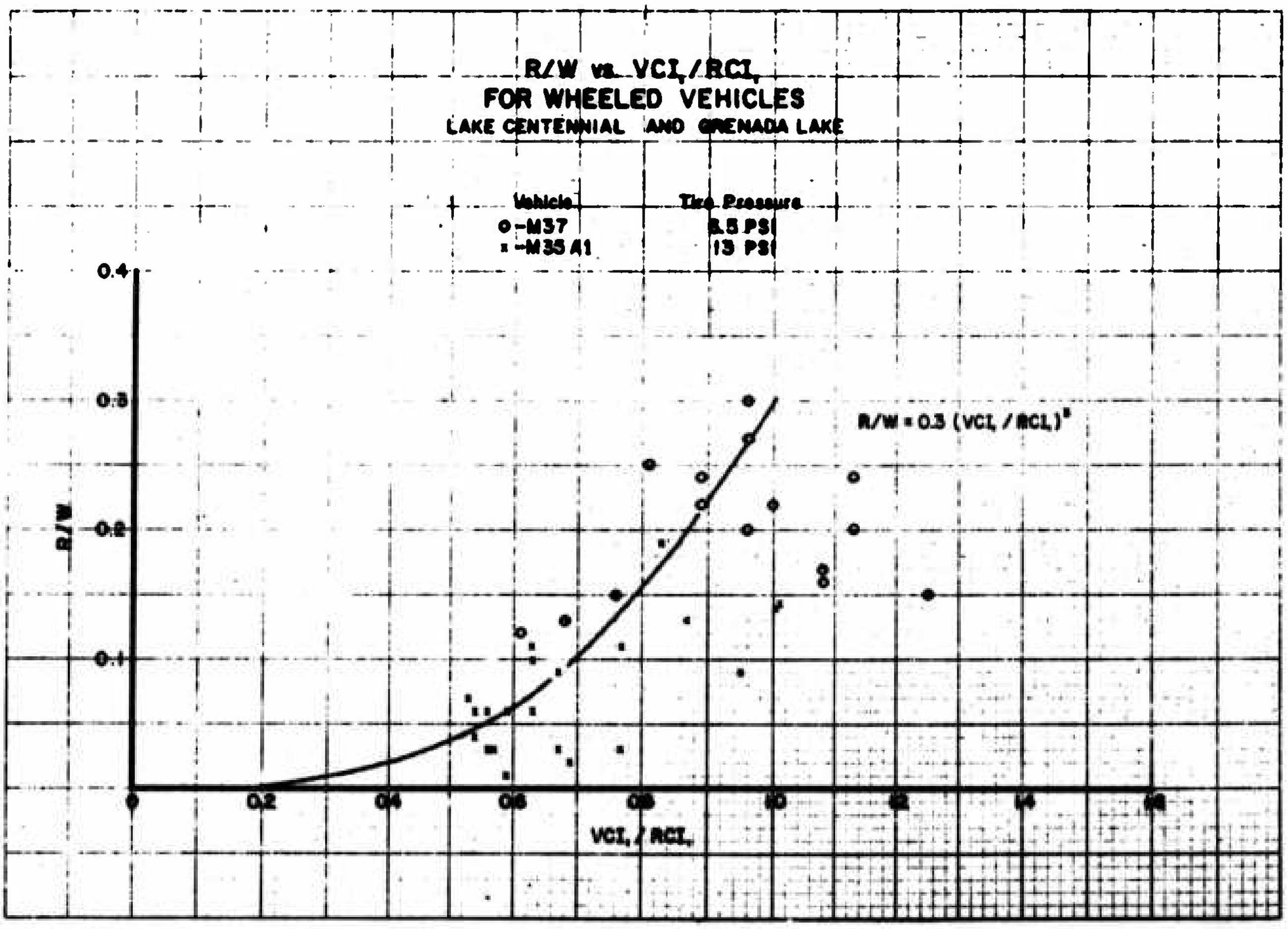


Fig. 56

both wheeled and tracked vehicles

$$R_g/W = 0.3(VCI_1/RCI_1)^3 \quad (28)$$

This expression is also plotted in both figures. It appears as an approximate upper bound to the measured data for wheeled vehicles. It is at best a poor approximation to tracked vehicle gross resistance measurements at soil strengths between 2 and 10 times VCI_1. In this region the data follows, rather, the complex curve shown. It is believed that this increase to a maximum when RCI_1 is between 4 and 5 times VCI_1 is due to suspension clogging. The Lake Centennial soil is at moisture contents producing decided "stickiness" in this soil strength range.* Stickiness effects will clearly vary with soil properties and with detailed vehicle design. There is too little information available for even the present authors to attempt any generalization at this time.

From equation (28), equation (27) may now be written in its proposed final form,

$$D/W = 0.3\left[K_\tau\left(\frac{RCI_1}{VCI_1}\right) - \left(\frac{VCI_1}{RCI_1}\right)^3\right] \quad (29)$$

All of the maximum drawbar pull (D/W) results developed during this program, on all vehicles, from both test areas, are plotted in Figure 58, as functions of the parameter (VCI_1/RCI_1). Each test is keyed according to which of three ranges of K_τ (0-0.375, 0.376-0.750, > 0.750) it fell into according to the field measurements. Also shown is equation (29), evaluated for K_τ = 0.25, 0.50, and 1.00. From this, it is considered that equation (29) expresses a useful approximate relationship between soil strength (RCI_1, K_τ), vehicle design (VCI_1), and drawbar pull performance for most first-order estimating and prediction purposes. It may also be taken to express gradeability (G_r), which, to a like precision, may be taken as

$$G_r = D/W \quad (30)$$

As footnoted on page 21, surface traction affects the actual minimum $\overline{RCI}_1$ required for one successful pass of a vehicle. Equation (29) clearly shows that (VCI_1) actually refers only to the condition where $K_\tau \equiv 1.0$. In other cases, the RCI_1 required for one, straight, level pass is given by

$$RCI_1' = VCI_1' = (VCI_1)(1/K_\tau)^{1/4} \quad (31)$$

*Note that the "stickiness range" of a given soil is related to moisture content and hence to cone index. When test results are plotted on the basis of (VCI_1/RCI_1), effects at a given cone index will appear at low values for very mobile vehicles (low VCI_1) and higher values for less mobile vehicles.

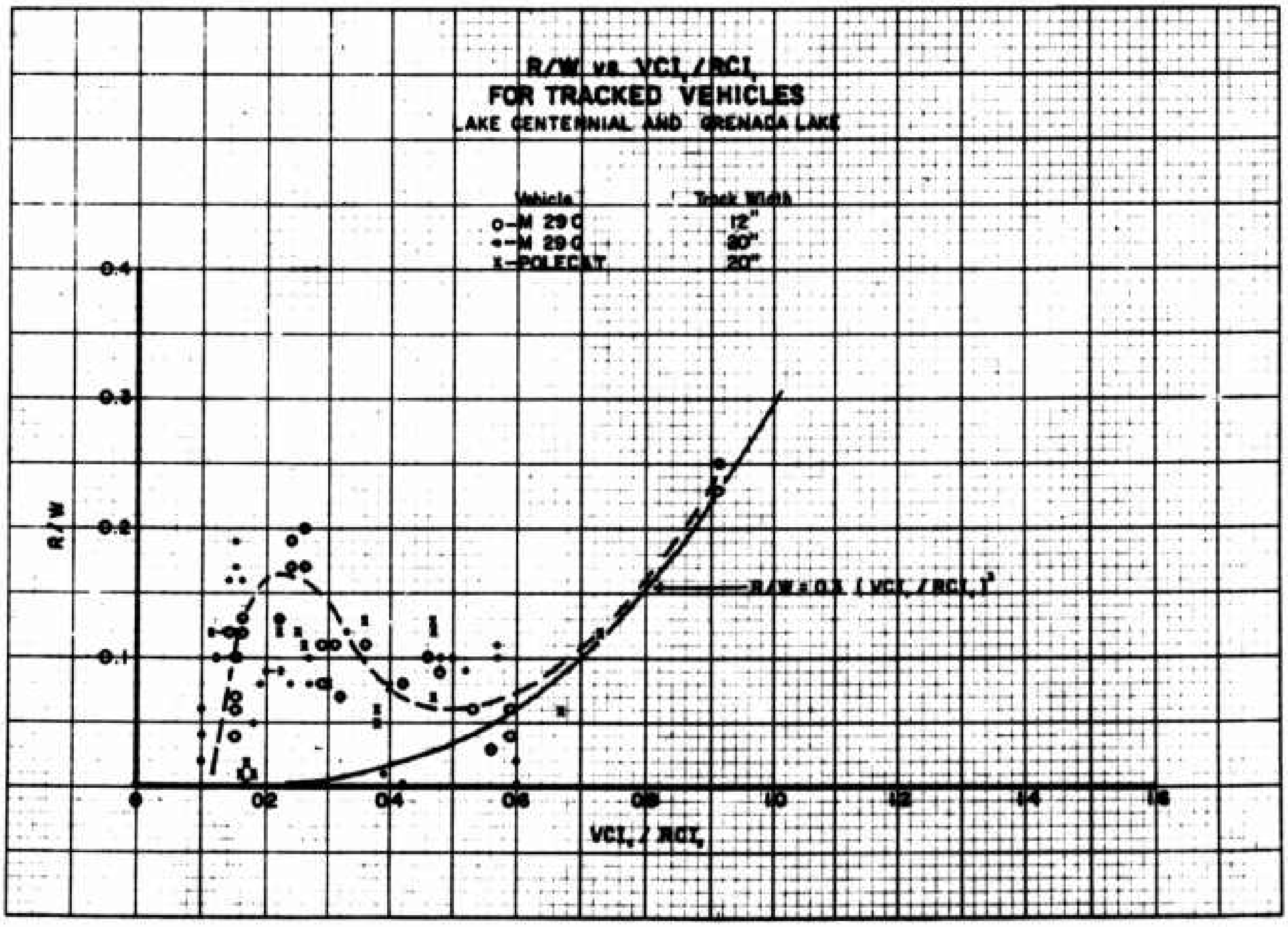


Fig. 57

so that for $K_\tau = 0.5$

$$VCI_1' = 1.19(VCI_1)$$

and, for $K_\tau = 0.25$

$$VCI_1' = 1.41(VCI_1).$$

Variations of K_τ of this order were regularly recorded, and scatter of a corresponding order is observed in the self-propelled test data.

Problem 2b. Prediction of Soil Strength Increment Required to Permit Free Maneuvering

Estimates of the minimum excess of RCI_1 over VCI_1 necessary to permit a given vehicle to maneuver freely in a level, weak-soil terrain are based upon three rude but not unreasonable assumptions.

1) The soil strength which will allow a given vehicle to execute continuously a slow-speed, 180-degree turn of approximately 25-foot radius may be considered sufficient to permit that vehicle to "maneuver freely"; i.e., to proceed continuously along a circuitous path in level terrain.
2) The requirement for additional soil strength during such a turn results from
   a) increased motion resistance, which imposes increased tractive loads on the soil/vehicle interface, and
   b) in skid-steered vehicles, the increased traction required from the running gear at the outside of the turn to produce a net turning moment sufficient to overcome the resisting moment of the ground contact areas.
3) The increment in soil strength necessary to support the increased traction requirements will be essentially the same as that required to produce a drawbar pull of the same magnitude as the resistance increment.

Estimates of relative motion resistance of a given test vehicle in a soil of given strength (RCI_1) were obtained directly from drive-line torque measurements made while running at several radii and straight ahead (radius = ∞). Such tests were run with six vehicle configurations, each in several soil strengths.

The results are illustrated in Figures 59 through 60, in which measured torques in each of several soil strengths are plotted versus the inverse of the turn radius ($1/r_t$). As an index of soil strength conditions, the remolded cone index for the 0-6-inch layer as measured for each test is shown. It may be seen that for each vehicle configuration, the effects of turning radius (expressed as the inverse) in a given soil strength are essentially linear, and that, with only a few exceptions associated with special grass conditions, the slope of the lines may reasonably be taken to be the same. Thus the increment in motion

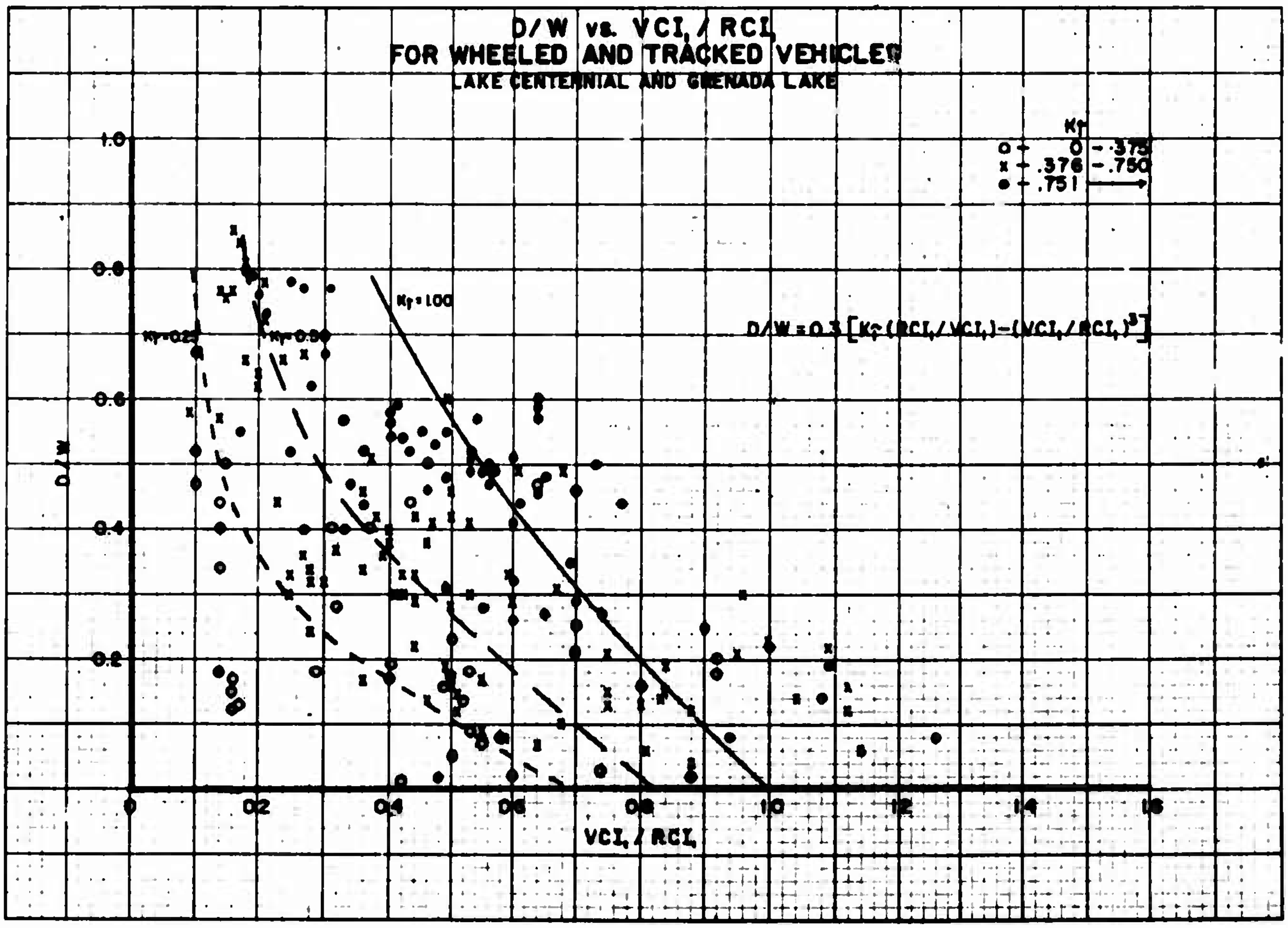


Fig. 58

resistance due to turning may be taken to be a function of turn radius and vehicle configuration, and essentially independent of soil strength.

Measured torques were converted to equivalent track or tire thrusts simply by multiplying by gear ratio between the torquemeter and the tire or sprocket, and dividing by the rolling radius of the tire or the pitch radius of the sprocket. The resulting increments in thrust (ΔR) due to turning were fit by an equation of the form

$$\frac{\Delta R}{W} = \frac{K_r}{r_t} \qquad (32)$$

where K_r = a constant for the given vehicle configuration

and r_t = turning radius *in feet*.

Resulting values of K_r are tabulated in Table 6.

In order to reach a conclusion as to the increment of soil strength required to permit free maneuvering, the increment $\Delta R/W$ was calculated for a turning radius of 25 feet, and the value of (RCI_1/VCI_1) needed to develop this much extra traction was read from Figure 58 assuming K_r = 1.0. Finally, for the skid-steered vehicle (the WEASEL), a further increment of 2 per cent was added, in accordance with the approximate analysis given in Appendix VII. The final estimated value, $(RCI_1/VCI_1)_\Sigma$, for all six vehicle configurations is tabulated in Table 6.

These values show a reasonable progression from 1-5 per cent in strength required for the wheeled vehicles to 15-25 per cent for the tracked WEASEL, with the articulated POLECAT requiring an increment of approximately 10 per cent. Both the trends and the order of magnitude shown appear qualitatively correct. Until further work can be done on this problem and the dependence of values of K_r upon vehicle parameters studies, it is suggested that the increment in soil strength required to permit free maneuvering in a weak soil situation be taken as follows:

for wheeled vehicles	5%
for tracked vehicles	25%
for articulated tracked vehicles	15%.

Problem 2c. Estimation of Maximum Vehicle Speed

The maximum speed of a vehicle in a level terrain with weak soil is influenced by the motion resistance offered by that soil. Accordingly, the appropriate procedure for calculating maximum speed is simply an extension of standard automotive engineering methods [*cf.* 18] to include the soil resistance with the other possible resistances. It was assumed that soil resistance was adequately given by

TURNING TEST RESULTS

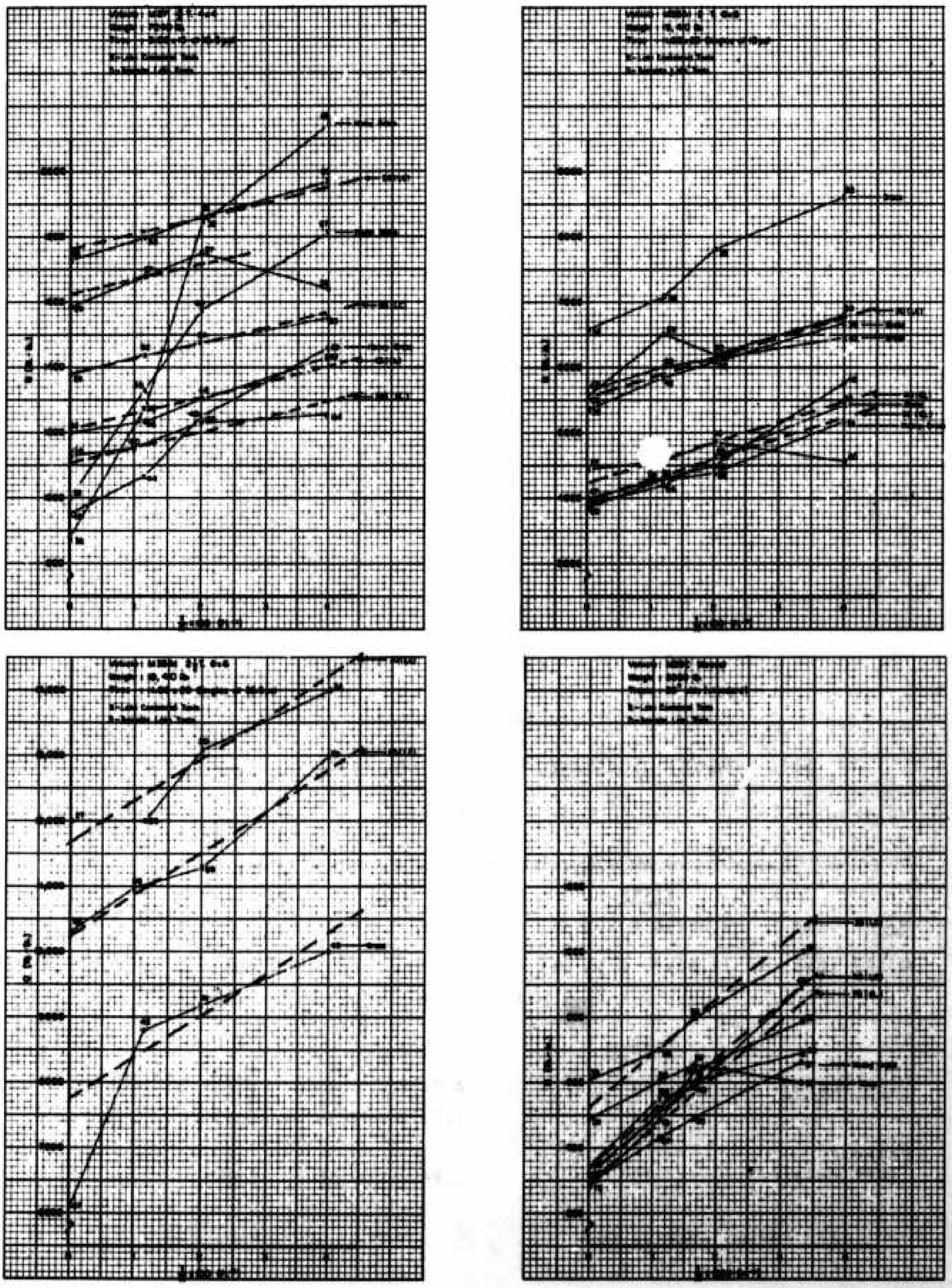


Fig. 30

TURNING TEST RESULTS

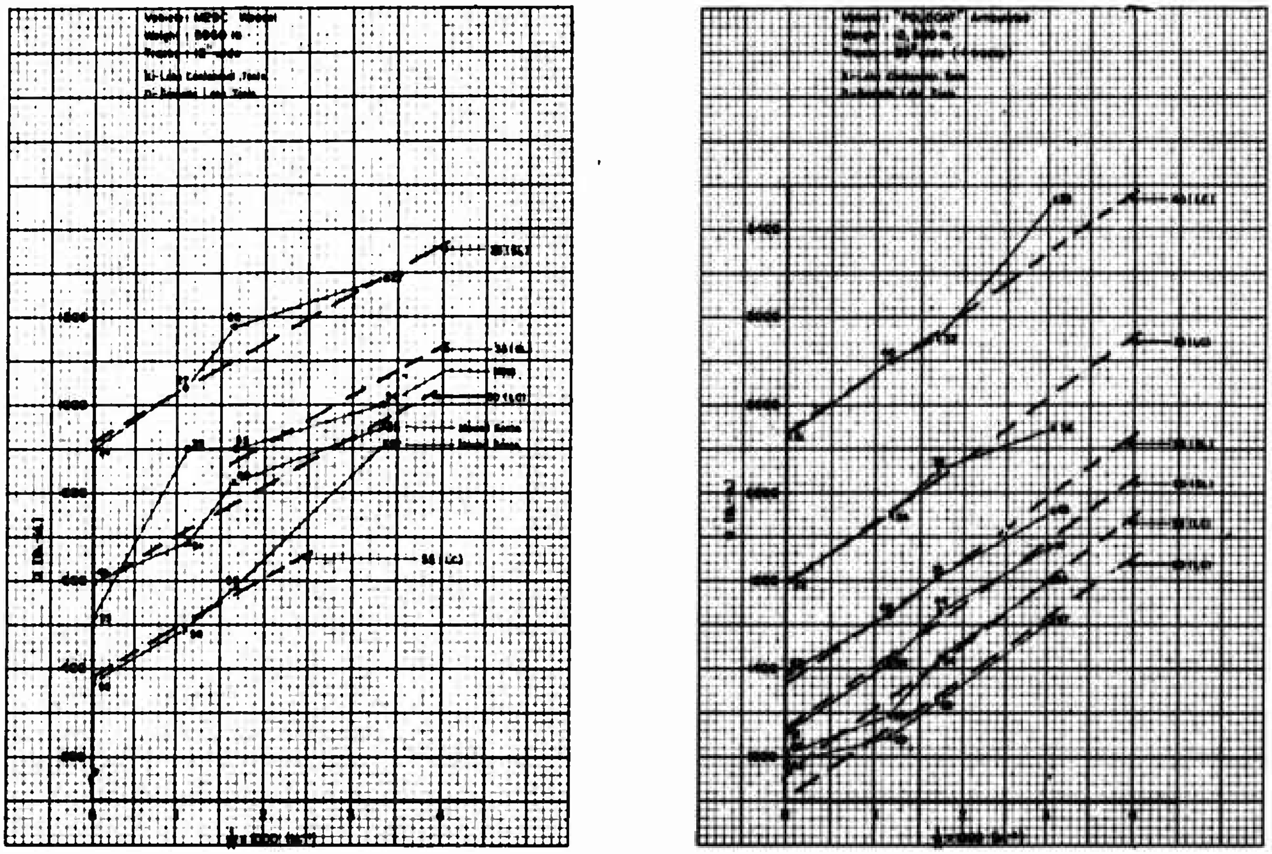


Fig. 60

TABLE 6

SOIL STRENGTH INCREMENTS REQUIRED FOR "FREE MANEUVERING"

Vehicle			"K_r"	$\frac{\Delta R}{W}$ (1)	$\frac{RCI_1}{VCI_1}$ (2)	$\left(\frac{RCI_1}{VCI_1}\right)_\Sigma$ (3)
		Tires				
M37	4x4	9.00x16 @ 6.5 psi	0.26	0.01	1.01	1.01
M35A1	6x6	11.00x20 @ 13 psi	0.57	0.02	1.02	1.02
		@ 35.5 psi	1.14	0.05	1.05	1.05
		Tracks				
M29C Weasel		20"	4.74	0.19	1.23	1.25
		12"	3.21	0.13	1.15	1.17
Polecat (articulated)		20"	1.94	0.08	1.09	1.09

(1) For 25' radius turn

(2) From Fig. 58, $K_r = 1.0$

(3) Corrected for skid steering as necessary

equation (28), and that it was not speed dependent. Then maximum speed in miles per hour (V) is

$$V \approx \frac{HP_A}{\Sigma R} \times 375. \qquad (33)$$

To estimate HP_A = horsepower available at wheel or sprocket,

$$HP_A = BHP \times n \qquad (34)$$

where BHP = brake horsepower

n = overall efficiency (treating accessory loads as an efficiency type of loss)

≈ 0.75 for wheeled vehicles

≈ 0.65 for tracked vehicles.

To estimate ΣR = total resistance

$$\Sigma R = R_A + R_T + R_s + G_r W \qquad (35)$$

where R_A = air resistance

≈ $0.004\ AV^2$

A = frontal area, sq. ft.

R_T = track or tire losses

≈ 0.015 W for tires

≈ (0.05 + 0.002 V) W for tracks

$G_r W$ = grade resistance

and R_s = soil resistance (eq. 28).

As noted, there may be a substantial loss (up to 0.15 W) due to track and suspension clogging on tracked vehicles (see Fig. 57), and an increment due to maneuver. Neglecting the latter two effects, and considering only level ground, equation (33) may be written

$$V \approx \frac{0.47(BHP/W_T)}{\left(\frac{VCI_1}{RCI_1}\right)^3 + 0.013\left(\frac{AV^2}{W}\right) + 0.05} \qquad (36)$$

for wheeled vehicles, and

$$V \approx \frac{0.40(BHP/W_T)}{\left(\frac{VCI_1}{RCI_1}\right)^3 + 0.013\left(\frac{AV^2}{W}\right) + 0.067V + 0.167} \qquad (37)$$

for tracked vehicles, where W_T = gross vehicle weight in short tons.

It is evident that allowances for slope, maneuver, and suspension clogging could readily be included as necessary or desirable.

In Figure 65, measured speeds in various soil strengths, as tabulated in Appendix III, Table III-49, are compared to predictions via equations (36) and (37) for four test vehicles. Considering the many test variables which could not be controlled, and the long series of gross approximations used to reach this point, the agreement is considered acceptable, except in the case of the POLECAT, which appears to have been "sick" during these tests. Field experience with other POLECATS does not confirm such low figures for operation on what, for it, is excellent footing.

SPEED vs. RCI_1 / VCI_1

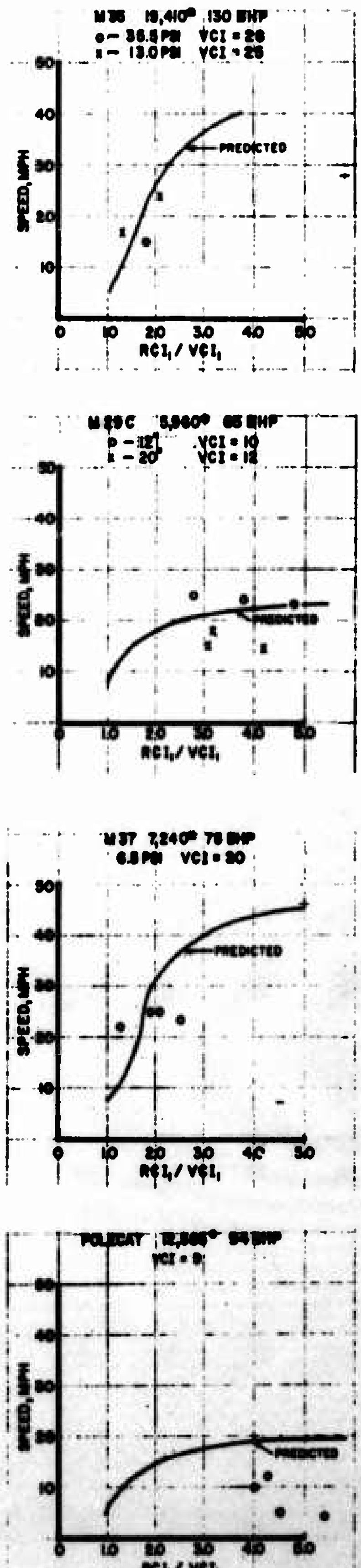


Fig. 61

ASSESSMENT OF RESULTS

The stated goals of the investigation, usable, first-order answers within a limited time frame, have been achieved. The results, like the methods and the analyses, are rough and contain nothing essentially new except perhaps actual, usable numbers. Probable precision is low (± 20-30 percent), but with these results available it is no longer possible to talk complete nonsense about one-pass vehicle performance.

Much more can, and should, be done, however, both in the way of developing more and better data, and even in analyzing the present data. While it is evidently useful to know the orders of magnitude of the several effects upon performance of variations in soil strength, the scatter of the VCI_1 versus q_n results shown in Figures 53 and 54 (for instance) leaves much to be desired, *particularly from the viewpoint of improved vehicle design*. It does, of course, make considerable difference whether VCI_1 for a given vehicle is 20 or 30. If, through a fuller understanding of all factors, new designs at the same ground pressure (for example) could be made to follow the lower limit, this would be a major improvement. Thus, while it is believed that the present study has roughed in the outlines of the full and proper answers ultimately required, it is clear that it can only be considered as an exploratory first-pass at the problem.

REFERENCES

1. Uffelmann, F. L., "Vehicle Mobility Research in the United Kingdom." Proceedings of Interservice Mobility Symposium, Hoboken, N. J., April 1955.
2. Freitag, D. R., A Dimensional Analysis of the Performance of Pneumatic Tires on Soft Soils. Auburn University, Auburn, Ala., June 1965.
3. U. S. Army Engineer Waterways Experiment Station, CE, Summary of Trafficability Studies Through 1955. Technical Memorandum No. 3-240, 14th Supplement, Vicksburg, Miss., December 1956.
4. U.S. Army Transportation Research Command, Swamp Fox II, Republic of Panama. Fort Eustis, Va., March 1963.
5. Cohron, G. T., "Soil Sheargraph." Agricultural Engineering, vol. 44, no. 10 (October 1963), pp. 554-556.
6. Wilson, Nuttall, Raimond Engineers, Inc., Six-Month Interim Report on One-Pass Vehicle Performance. Report 113-1, Chestertown, Md., 8 July 1964.
7. Corbett, R.V., Ehrlich, I.R., and Schwartz, R. B., Analysis of Cone-Index Measurements and Vehicle Performance for the Prediction of One-Pass Soil-Strength Requirements. Davidson Laboratory Report R-1060, Stevens Institute of Technology, Hoboken, N. J., May 1965.
8. Wilson, Nuttall, Raimond Engineers, Inc., Summary of Trafficability Studies Through 1963. Vol. I-VIB, Chestertown, Md., 1 June 1965.
9. U. S. Army Engineer Waterways Experiment Station, CE, Tests on Natural Soils with Self-Propelled Vehicles, 1951-1953. Technical Memorandum No. 3-240, 12th Supplement, Vicksburg, Miss., November 1954.
10. Micklethwait, E. W. E., Tracks for Fighting Vehicles. Military College of Science, School of Tank Technology, Chobham Lane, Chertsey, July 1964.
11. Gross, W. A. and Elliot, A. D., Traction as Influenced by Soils and Their Condition. Society of Automotive Engineers, New York, N. Y., September 1946.
12. Department of the Army, Soils Trafficability. Technical Bulletin TB ENG 37, 10 July 1959.
13. Smith, J. L., A Study of the Effects of Wet Surface Soil Conditions on the Performance of a Single Pneumatic-Tired Wheel. U. S. Army Engineer Waterways Experiment Station, CE, Technical Report No. 3-703, Vicksburg, Miss., November 1965.
14. Meyer, M. P., Comparison of Engineering Properties of Selected Temperate and Tropical Surface Soils. U. S. Army Engineer Waterways Experiment Station, CE, Vicksburg, Miss., (in preparation).
15. Drücker, D. C., Action of Towed and Driving Wheels Wheels in Plastic Soil. As reprinted in Land Locomotion Research Laboratory Report 182, Detroit, Mich., 1955.
16. Evans, I., The Measurement of Surface Bearing Capacity in the Study of Earth-Crossing Machinery. Institution of Civil Engineers (U.K.), 1950.
17. Smith, J. L., "Comparison of Soil Strength Tests Used in Mobility Research." Report of Mobility Consultants' Conference, U. S. Army Engineer Waterways Experiment Station, CE, Vicksburg, Miss., June 1962.
18. The Society of Automotive Engineers, Truck Ability Prediction Procedure, 5th edition. Cooperative Engineering Program, SAE Recommended Practices, TR-82, March 1960.
19. Evans, I., "The Sinkage of Tracked Vehicles on Soft Ground." British Journal of Applied Physics, November 1953.
20. Bekker, M. G. and Janosi, Z., Analysis of Towed Pneumatic Tires Moving on Soft Ground. Land Locomotion Laboratory Report RR-6, LL-62, USATAC, Detroit, Mich., 1960.
21. Uffelmann, F. L., "The Performance of Rigid Cylindrical Wheels on Clay Soil." Proceedings, 1st International Conference on the Mechanics of Soil-Vehicle Systems, Turin, Italy, June 1961.
22. Nuttall, C. J., Jr., The Rolling Resistance of Wheels in Soil. Experimental Towing Tank Report 418, Stevens Institute of Technology, Hoboken, N. J., July 1951.
23. Freitag, D. R. and Knight, S. J., Technique for Estimating the Slope Climbing Ability for Wheeled Vehicles in Sand. Society of Automotive Engineers, New York, N. Y., January 1963.
24. U. S. Army Engineer Waterways Experiment Station, CE, Tests on Coarse-Grained Soils with Self-Propelled and Towed Vehicles, 1958-1961. Technical Memorandum No. 3-240, 17th Supplement, Vicksburg, Miss., May 1963.
25. Harrison, W. L., et al., A Soil Value System for Land Locomotion Mechanics. Land Locomotion Laboratory Report No. 5, USATAC, Detroit, Mich., December 1958.
26. Haley, P. W., Mobility Environmental Research Study One-Pass Program. Land Locomotion Laboratory Report No. 101, USATAC, Detroit, Mich., January 1965.
27. U. S. Army Engineer Waterways Experiment Station, CE, Trafficability of Soils, Tests on Natural Soils with Self-Propelled Vehicles, 1949 and 1950. Technical Memorandum No. 3-240, 10th Supplement, Vicksburg, Miss., January 1954.
28. U. S. Army Engineer Waterways Experiment Station, CE, Trafficability of Soils. Tests on Natural Soils with Self-Propelled Vehicles, Jan. 1963 --March 1965. Technical Memorandum No. 3-240, 18th Supplement, Vicksburg, Miss.
29. Nuttall, C. J., Jr., "Some Notes on the Steering of Tracked Vehicles by Articulation," Journal of Terramechanics, Vol. 1, No. 1, 1964.
30. Steeds, W., Theoretical Aspects of Tank Steering, School of Tank Technology, 1943; or "Tracked Vehicles," Automobile Engineer, April-June 1950.

APPENDIX I

THE FORM OF THE RELATIONSHIP OF LIMITING CONE INDICES FOR TRACKED AND WHEELED VEHICLES TO BASIC VEHICLE CHARACTERISTICS

TRACKED VEHICLES

Some twelve years ago, just before emigrating to a more productive line of endeavor, Evans concluded that the performance of tracked vehicles in effectively frictionless soils could be summarized satisfactorily by the following four semi-empiric equations[1,19]*

$$\frac{q_1 - q}{q_1 - q_n} = 1 - e^{-\frac{5z}{b_t}} \tag{1}$$

$$\frac{R_P}{W_1} = \frac{z}{L} \cdot \frac{q}{q_n} \tag{2}$$

$$\frac{T}{W_1} = \frac{c}{q_n} \tag{3}$$

and

$$\frac{D}{W_1} = \frac{T}{W_1} - \frac{R_P}{W_1} \tag{4}$$

where q = bearing capacity of the soil

$$q_1 = \sqrt{\frac{W_1 E}{n_b b_t d_b}} \tag{5}$$

or

$$= \frac{W_1}{n_b b_t y}, \tag{6}$$

whichever is smaller,

q_n = nominal unit ground pressure

$$= \frac{W_1}{b_t L} \tag{7}$$

b_t = track width

W_1 = weight on one track

E = Young's modulus for soil (taken as 1000 lb/in^2)

n_b = number of bogie wheel stations per track

d_b = bogie wheel diameter

y = track pitch

L = length of track on (hard, level) ground

R_P = external motion resistance due to plastic flow

T = tractive effort

D = drawbar pull

c = soil cohesion

all in consistent units. Equation (1) may be solved explicitly for sinkage:

$$z = \frac{b_t}{5} \log_e \left[\frac{q_1/q_n - 1}{q/q_n - 1}\right] \tag{8}$$

Substituting in (4)

$$\frac{D}{W} = \frac{c}{q_n}\left[1 - \frac{q}{5_c} \cdot \frac{b_t}{L} \log_e \frac{q_1/q_n - 1}{q/q_n - 1}\right]. \tag{9}$$

At the point where $\frac{D}{W} = 0$, the required soil bearing capacity, q_{crit}, is given by

$$q_{crit} = q\left[1 + \frac{q_1/q_n - 1}{e^{L/b_t}}\right]. \tag{10}$$

Examination of the quantity in brackets as it applies to two widely different vehicles, the M29C Weasel and the M60 Battle Tank, gives values of 1.024 and 1.008, respectively. That is, it may reasonably be taken as 1, thus yielding in the limit the simple and useful but not very remarkable result,

$$q_{crit} \approx q_n\,. \tag{11}$$

PNEUMATIC-TIRED VEHICLES

According to a simple concept, described in 1960 by Bekker and Janosi [20], a pneumatic tire operating in a plastic material will not deflect significantly unless its total effective inflation pressure is less than the yield pressure for the material. It is reasonable to assume that, in the limiting case where the soil is so weak that the tire sinks considerably on its first pass and can just self-propel itself with no margin for drawbar or slope loading, there will, in fact, be little deflection of the tire in the soil.

The test data on single tires in clay soils, developed by WES over the past several years in the AMRB soil bins, have recently been reported in summary form by Freitag [2]. Freitag shows that, for a wide range of drawbar performance, soil strengths, and tire sizes, shapes, and loadings, the data over a wide

*See References, p. 33 in main body of report.

range of soil strengths collapse quite well on the basis of the load numeric

$$\frac{W_1}{\overline{CI}\ b\ d\ \Delta^{1/2}} \tag{12}$$

where W_1 = the load on the single tire, lb.

$\overline{CI}$ = the average cone index of the test soil bed, uniform with depth, psi

b = undeflected tire section width, in.

d = undeflected tire diameter, in.

$\Delta = \frac{\delta}{h}$ = deflection on a hard surface, at test inflation and under test load, divided by tire section height from rim flange, in./in.

This may be rewritten as

$$\left(\frac{q_n}{\overline{CI}}\right)\left(\frac{1}{2\ \Delta^{1/2}}\right) \tag{13}$$

where $q_n = \frac{W_1}{b\,r}$

and r = undeflected tire radius, in.

Close examination of the data near the loading point where drawbar pull vanishes (D/W=O) (Figures I-1 to I-3), however shows that *in this limited region* the critical load numeric (in similar form) is as well given for all deflections as

$$\frac{q_n}{\overline{CI}}\ (= 0.4) \tag{14}$$

This indicates that, near the failure point, pneumatic tires may be considered as essentially rigid. Accordingly, Uffelmann's work with rigid wheels may be germane [21].

Uffelmann considered that the results of his several years of tests on large rigid wheels in laboratory clay pits was adequately expressed by Drücker's 1955 proposals derived for small sinkages from simple plasticity considerations [15], as follows:

$$\frac{R_P}{W_1} = \frac{W_1}{q\ b\ d} \tag{15}$$

and $$\frac{z}{d} = \left(\frac{W_1}{q\ b\ d}\right)^2 \tag{16}$$

For traction, Uffelmann assumed

$$\frac{T}{W_1} = \frac{c\ b\ \ell}{W_1} \tag{17}$$

where ℓ = effective contact length

$\approx d\sqrt{\frac{z}{d}}$ for small sinkages. (18)

From equations (15-18), at the critical point where drawbar pull vanishes,

$$c = \frac{W_1}{b\ d} = \frac{q_n}{2} \tag{19}$$

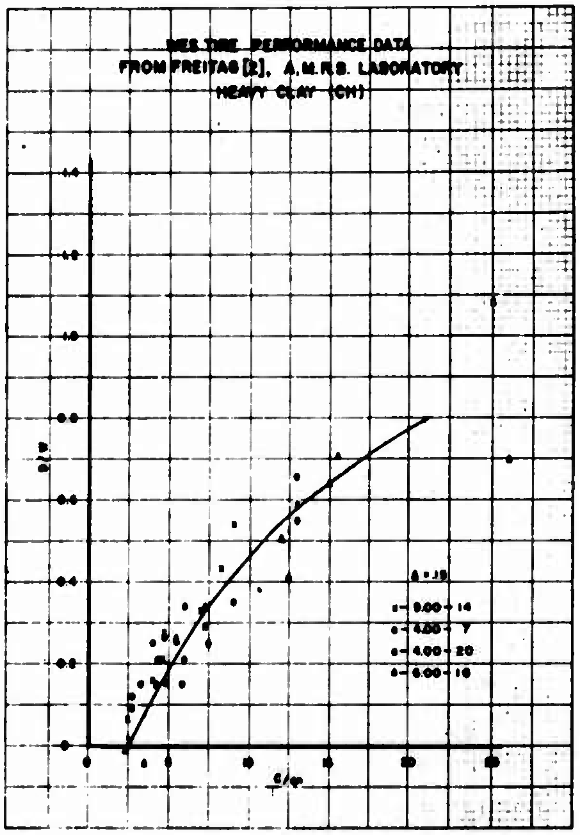


Fig. I-1

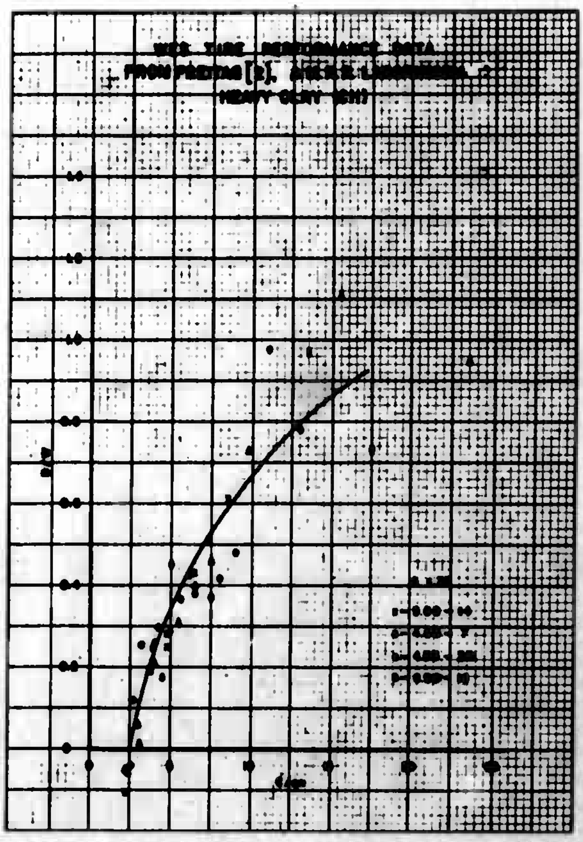


Fig. I-2

or, taking from plasticity theory the classical relationship between bearing capacity at the surface and cohesion [see, for example, Reference 15]; i.e.,

$$q = 5.7\ c\ ; \tag{20}$$

then

$$q_{crit} = 2.85\ q_n. \tag{21}$$

Note that while Drücker's published derivation of his equations, and Uffelmann's extension to include traction, are based upon some conventional approximations to simplify the geometry and algebra involved, the final result (eq. 19) may be shown to be

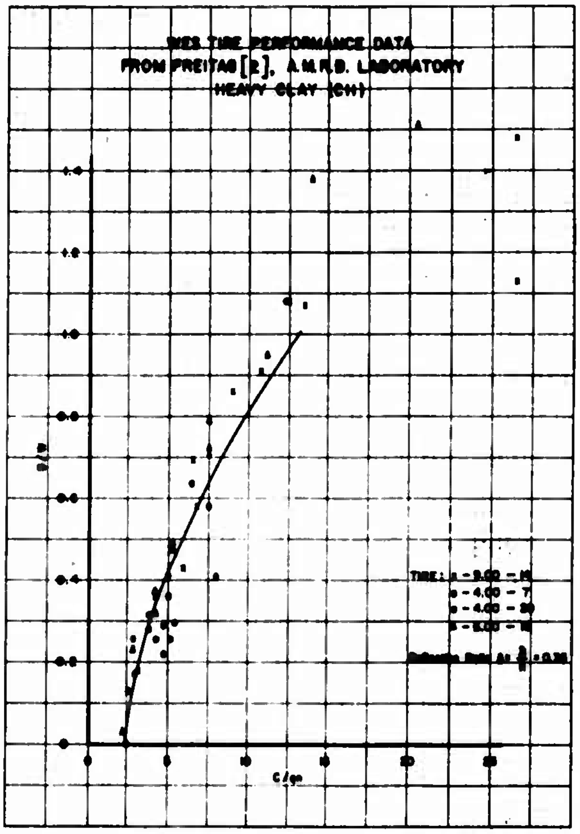


Fig. 1-3

as valid as the basic assumptions up to sinkages of the order of a full radius.

Also, the same results would be achieved by the Bernstein approach [see, for instance, Reference 22], which relates wheel behavior to that of small plates expressed by

$$p = k\ z^n \tag{22}$$

where p = resisting pressure on the plate

z = sinkage

and k and n are curve-fitting parameters.

For a uniform clay soil bed, $n \approx 0$, and the Bernstein expressions for sinkage and resistance become identical to Drücker's equations, (15) and (16), above.

From the literature [*cf.* 16, 17] it is evident that in frictionless soils the cone index may be taken as a direct measure of bearing capacity, i. e.,

$$q \approx k'CI$$

and that $k' \approx 1.5$

so that $q_{crit} \approx 1.5\ VCI_1.$

Equations (11), (14), and (21) may then be summarized in consistent cone index form as follows:

Evans for tracks,

$$VCI_1 \approx 0.67\ q_n \tag{23}$$

Uffelmann/Drücker/Bernstein for rigid wheels,

$$VCI_1 \approx 1.9\ q_n \tag{24}$$

WES/Freitag for pneumatic tires,

$$VCI_1 \approx 2.5\ q_n. \tag{25}$$

For present purposes the significant point is that, on the basis of several theoretical approaches, the basic form of relationship to be expected in the field data is simply

$$VCI_1 = k\ q_n. \tag{26}$$

APPENDIX II

AN APPROACH TO A "CRITICAL LAYER" RULE FOR ONE-PASS OPERATIONS OF TIRES IN WEAK SOILS

In the development of 50-pass prediction methods using the cone penetrometer, WES established a rule whereby, barring significant anomolies, the strength of a fine-grained soil in which a vehicle was operating was taken to be the average cone index (corrected for remolding) measured in a 6-inch thick "critical layer." The critical layer was specified essentially as a function of gross vehicle weight [3].* In sands, however, it was generally found that the cone index increased linearly with depth, and the gradient of the cone index versus depth curve was adopted as the controlling soil strength parameter [23,24].

The physical meaning of the "critical layer" has not been clearly developed. Upon consideration, however, it appears to represent a convenient averaging procedure, rather than truly a "critical" section of the soil profile. A typical cone index versus penetration curve for a field soil situation will look about as shown in Figure II-4. It can usually be approximated reasonably by means of a straight line having an intercept and a slope or gradient. A "critical layer" average can thus be interpreted as an index of the average strength over the range of the profile within the layer, or equally, as the average strength for still larger segments of the profile centered in the designated layer. In the limit, it could be considered as the average strength for the entire profile from the surface to a depth twice the depth of the "critical layer" center. So interpreted, lowering or raising the "critical layer" reflects that, in consonance with general soil mechanics theory, various vehicles are influenced by the soil strength profile to greater or lesser depths, according to their size and/or nominal loading.

The recently published synthesis by Freitag [2] of tests on single tires in sand and clay, performed over several years in the WES/AMRB laboratory soil bins, was examined in this context. Freitag shows that drawbar pull, sinkage, driving torque, and free-rolling motion resistance of tires of several sizes and proportions, operating under a range of wheel loads and inflations, and in a full range of soil strengths, collapse well on the basis of the following simple load numerics:

For Clays -- $$\frac{W_1}{C\, b\, d\, \Delta^{1/2}} \qquad (1)$$

For Sands -- $$\frac{W_1}{G\, (bd)^{3/2}\, \Delta} \qquad (2)$$

where W_1 = load on a single tire, lb

b = undeflected tire section width, in.

d = undeflected tire diameter. in.

$\Delta = \frac{\delta}{h}$ = deflection on a hard surface, at test inflation and under test load, divided by tire section height from rim flange, in./in.

C = average cone index, psi

and G = average cone index vs. depth gradient, psi/in.

Closer examination of the data in the immediate vicinity of the loading at which drawbar pull vanishes, however, (see Figs. I-1 to I-3, App. I, for clay results and Figs. II-1-3, this appendix, for sand) shows that in this limited region both the sand and clay load numerics are less dependent upon tire deflections than indicated by equations (1) and (2), and may be better approximated by:

For Clays -- $$\frac{W_1}{C\, b\, d} \qquad (3)$$

For Sands -- $$\frac{W_1}{G\, (bd)^{3/2}\, \Delta^{1/2}} . \qquad (4)$$

Because the clay tests were run in prepared bins such that the cone index was essentially constant with depth, "C" may be interpreted *either* as an average cone index over some depth, or as the *intercept* of a straight line approximation to the profile (Fig. II-5a). G, consistent with the latter interpretation, is already taken as the slope (Fig. II-5b). Thus the general case may be as in Figure II-5c:

$$CI = C + G\, z . \qquad (5)$$

In this case the average for the layer (0-z_0) would be:

$$\overline{CI}_{(0-z_0)} = C + 1/2G\, z_0 . \qquad (6)$$

*See References, p. 33 in main body of report.

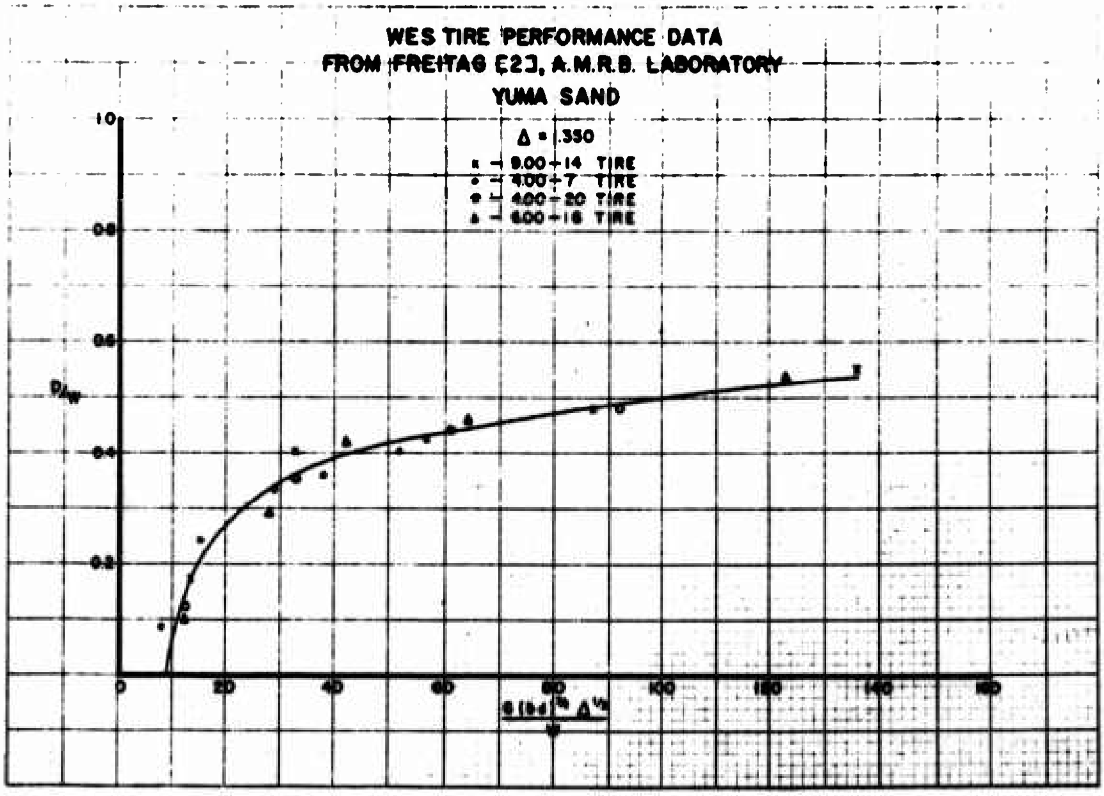


Fig. II-1

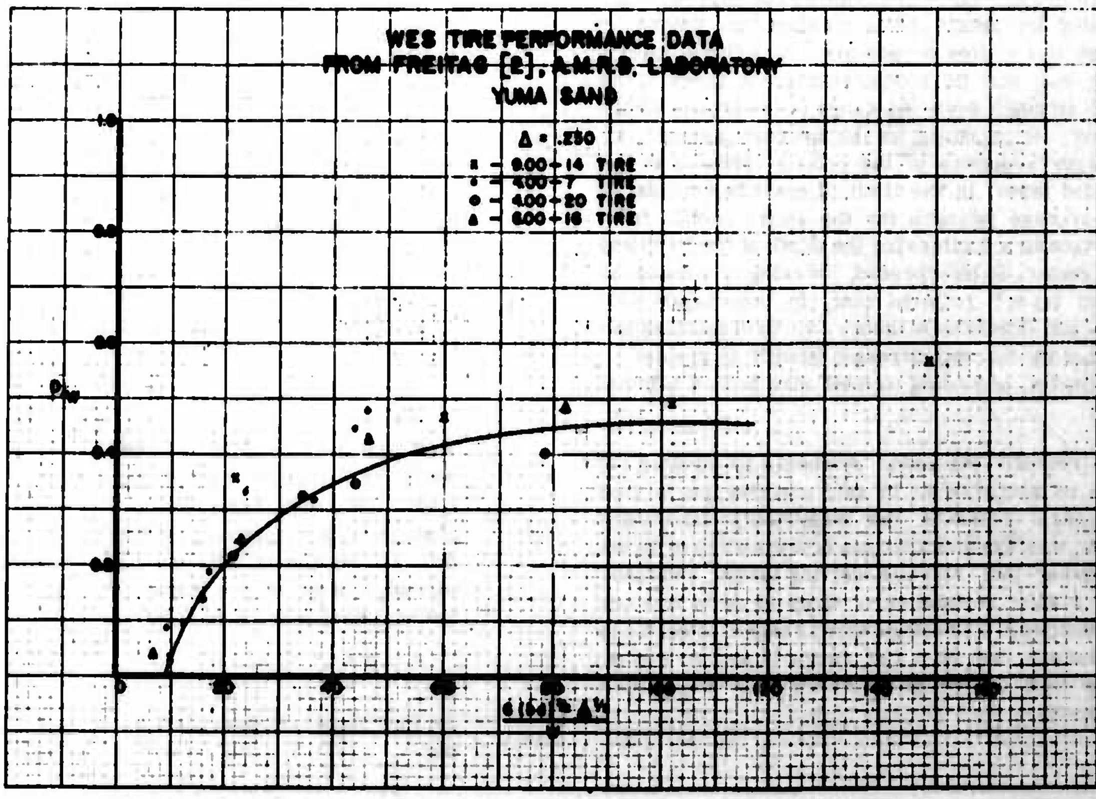


Fig. II-2

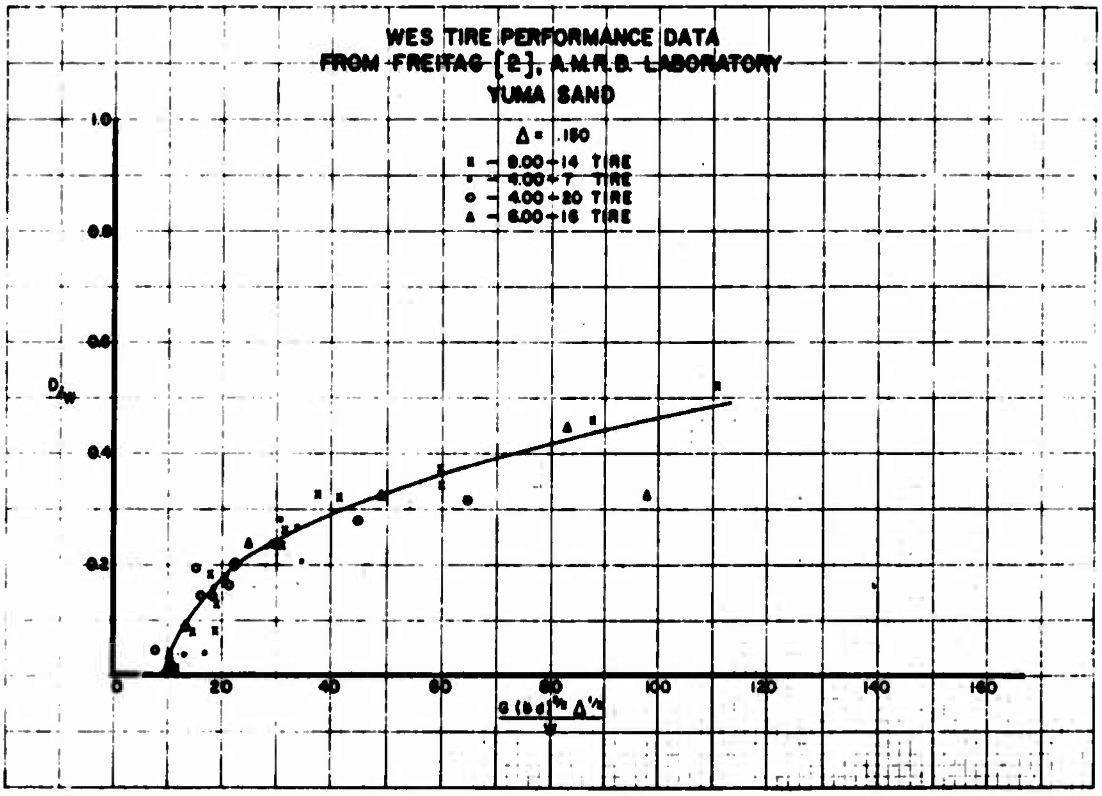


Fig. II-3

It may now readily be shown that the separate clay and sand numerics (3) and (4) might be considered as end points of a single numeric of the form

$$\frac{W_1}{\overline{\overline{CI}}_{(0-z_0)}\ b\ d}\ . \qquad (7)$$

By substituting (6) and taking

$$z_0 = \sqrt{b\ d\ \Delta} \qquad (8)$$

(7) becomes

$$\frac{W_1}{C\ b\ d + 1/2G\ (bd)^{3/2}\ \Delta^{1/2}}\ ^* \qquad (9)$$

which plainly reduces to the clay numeric (3) when G=0, and to the sand numeric (4) when C=0.

Condition (8) becomes a "critical layer" rule for tires in either sand or clay, and perhaps for the myriad soils between, as well. To explore its reasonableness in this role, (8) may be rewritten

$$\sqrt{b\ d\ \Delta} = \sqrt{b\ d \cdot \frac{\delta}{h}} \qquad (10)$$

or, since for the normal form of tire with which the major portion of the tests were run

$$h \approx b, \qquad (11)$$

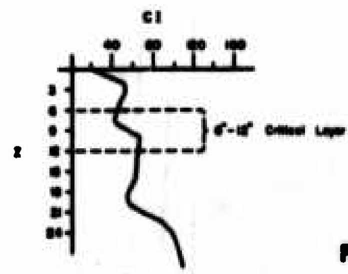


Fig. II-4

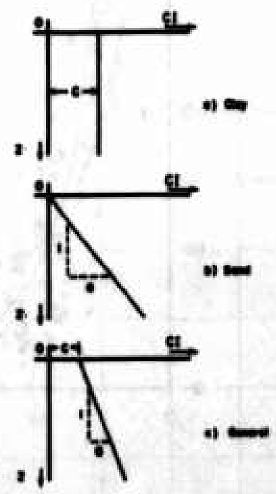


Fig. II-5

*It is interesting to note that a similar form for the controlling numeric was proposed by Nuttall in 1951 on the basis of dimensional reasoning applied to the equations for rolling resistance of wheels in soils derived from the Bernstein assumptions [22].

then

$$\sqrt{b\ d\ \Delta} \approx \sqrt{d\ \delta} \tag{12}$$

$$\approx \ell/2 \tag{13}$$

where ℓ = the hard surface contact length of the deflected tire.

Again for conventionally proportioned tires over the full practical range of deflections,

$$0.6\ b < \ell/2 < 1.2\ b. \tag{14}$$

Thus condition (8), interpreted as a layer rule, suggests that the proper depth to be averaged is of the order of the minimum planar dimension of the hard surface contact area, which is reasonable.

As a necessary (but clearly not sufficient) check on the validity of the combined numeric (9), the towing resistance data tabulated by Freitag (with the sand values reduced by a constant R/W = 0.04, to eliminate -- quite arbitrarily -- this thus far unexplained anomly in the sand data) were consolidated on that basis. The results, shown in Figure II-6

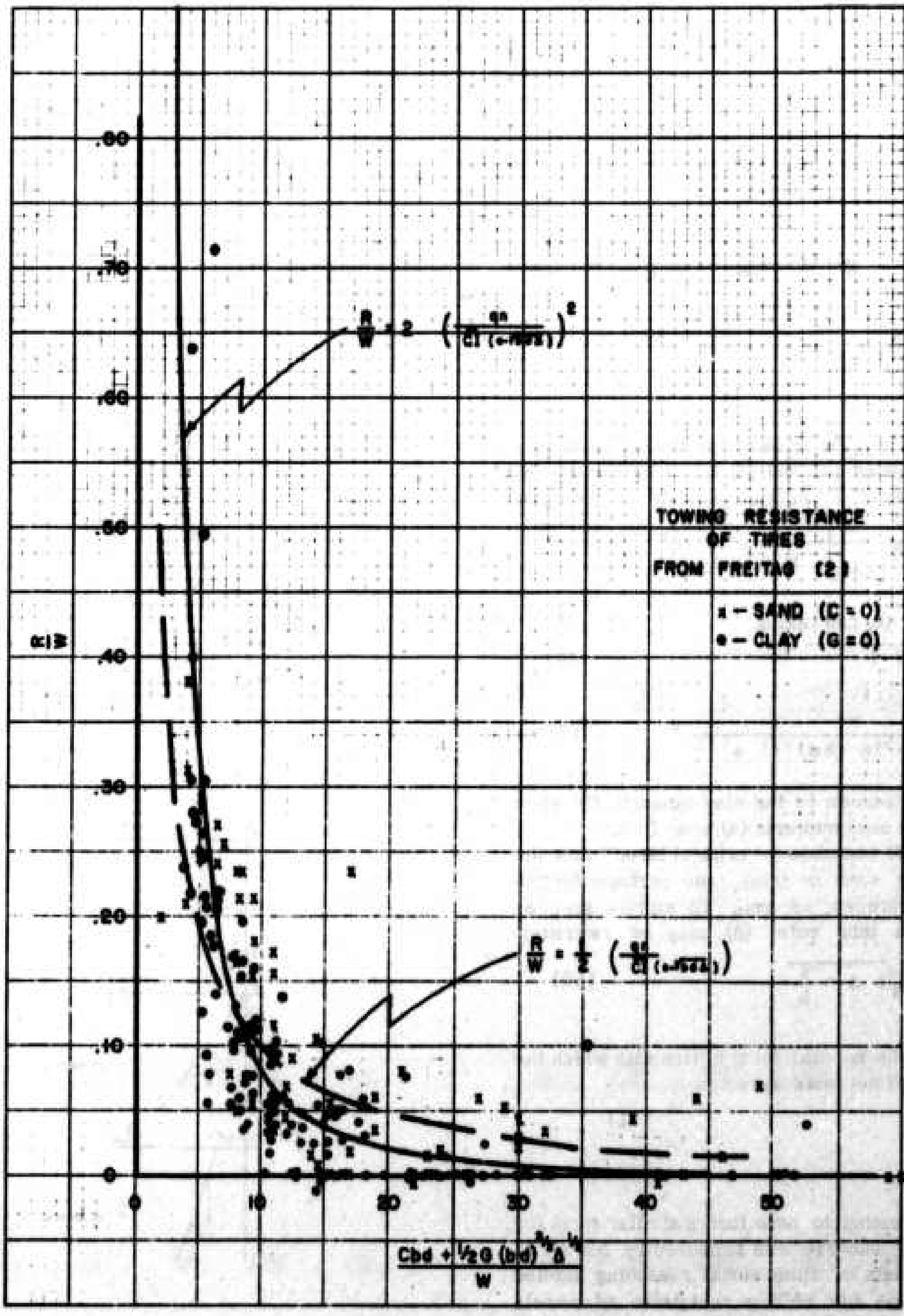


Fig. II-6

are presentable. The fact that the multiplier (1/2) applied to the "G" term in the denominator (eq. 9) appears appropriate is particularly encouraging. The pooled data are reasonably well fit by the equation

$$\frac{R_S}{W_1} = 2\left[\frac{q_n}{\overline{CI}_{(0 - \sqrt{b\ d\ \Delta})}}\right]^2 \qquad (15)$$

where $q_n = \frac{W_1}{b\ r}$ = the nominal unit ground pressure for a wheel,

and r = undeflected tire radius.

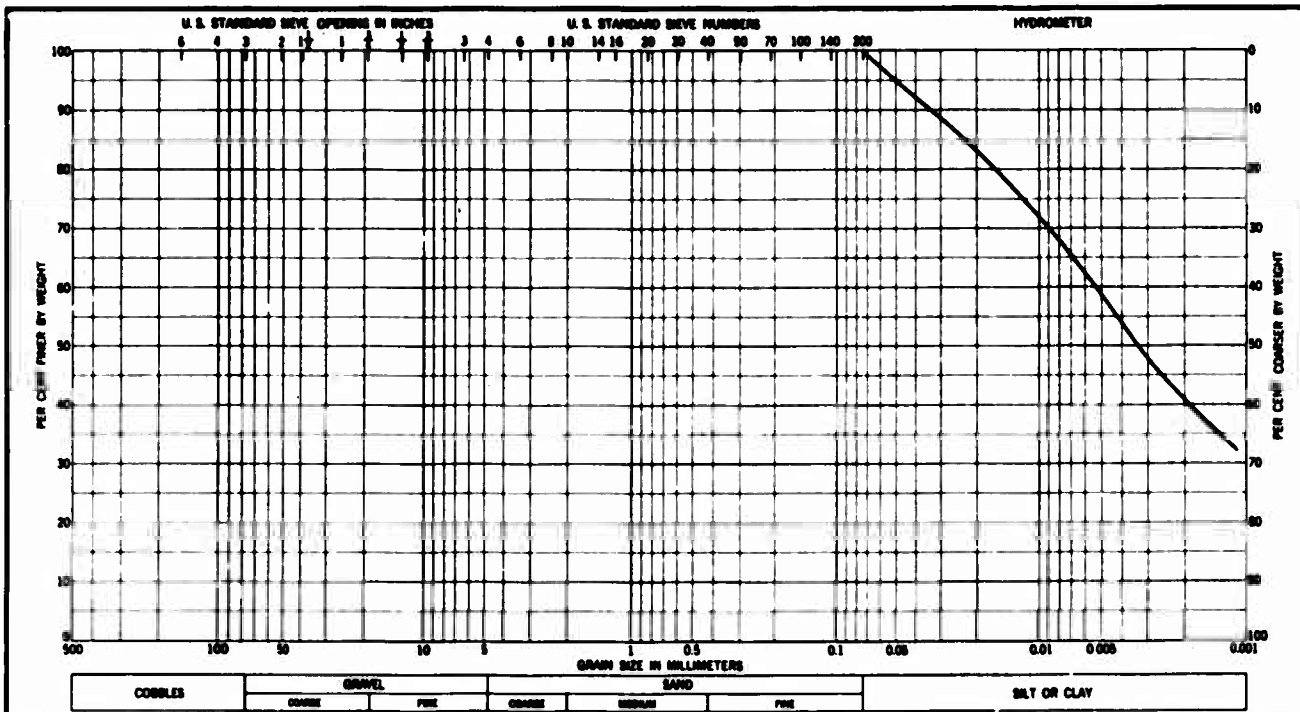
The theoretical value proposed by Drucker and others for rigid wheels *in plastic clays* Appendix I, eq. (15) reduced to cone index terms by using Appendix I, eq. (29) is

$$\frac{R_S}{W_1} = \frac{1}{2}\ \frac{q_n}{\overline{CI}_{(0 - \sqrt{b\ d\ \Delta})}} \qquad (16)$$

This is also shown. While not as good a fit to the data as equation (15), it does quite well, especially for the sand results.

APPENDIX III

BASIC TEST DATA



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		CLAY (CH)		74	32	42

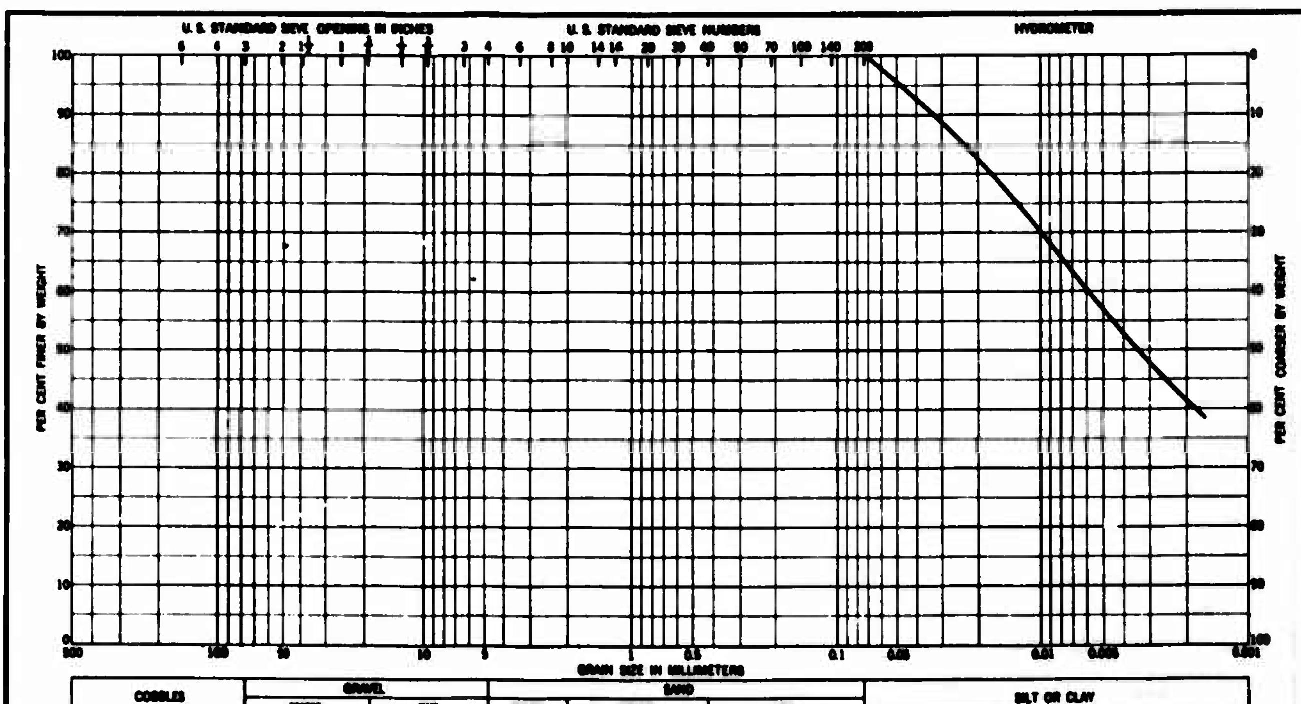
Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS

Area 1, 2, 3, AND 4

Location LAKE CENTENNIAL NO. 1

Date OCT 1963-JAN 1964

GRADATION CURVES



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		CLAY (CH)		76	36	40

Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS

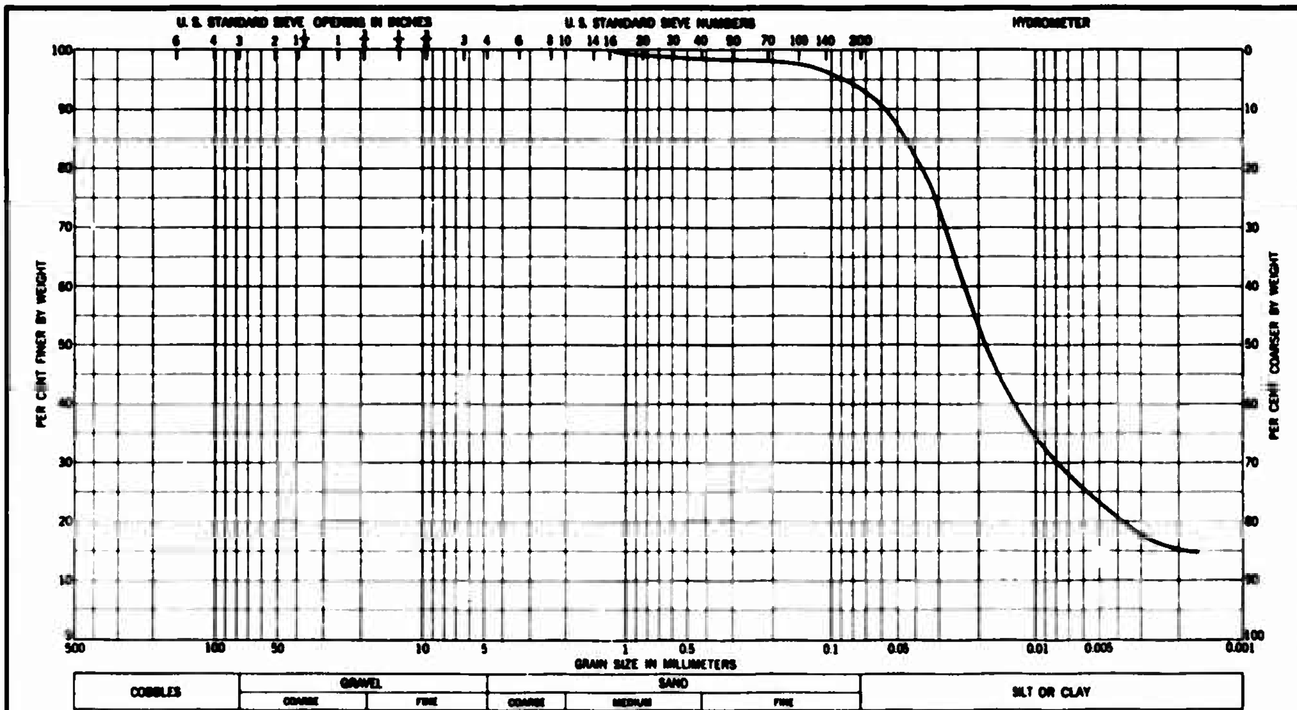
Area 1, 2, 3, 4, AND 5

Location LAKE CENTENNIAL NO. 2

Date JULY 1964-SEPT 1964

GRADATION CURVES

Fig. III-1



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		CLAYEY SILT (ML)		38	28	10

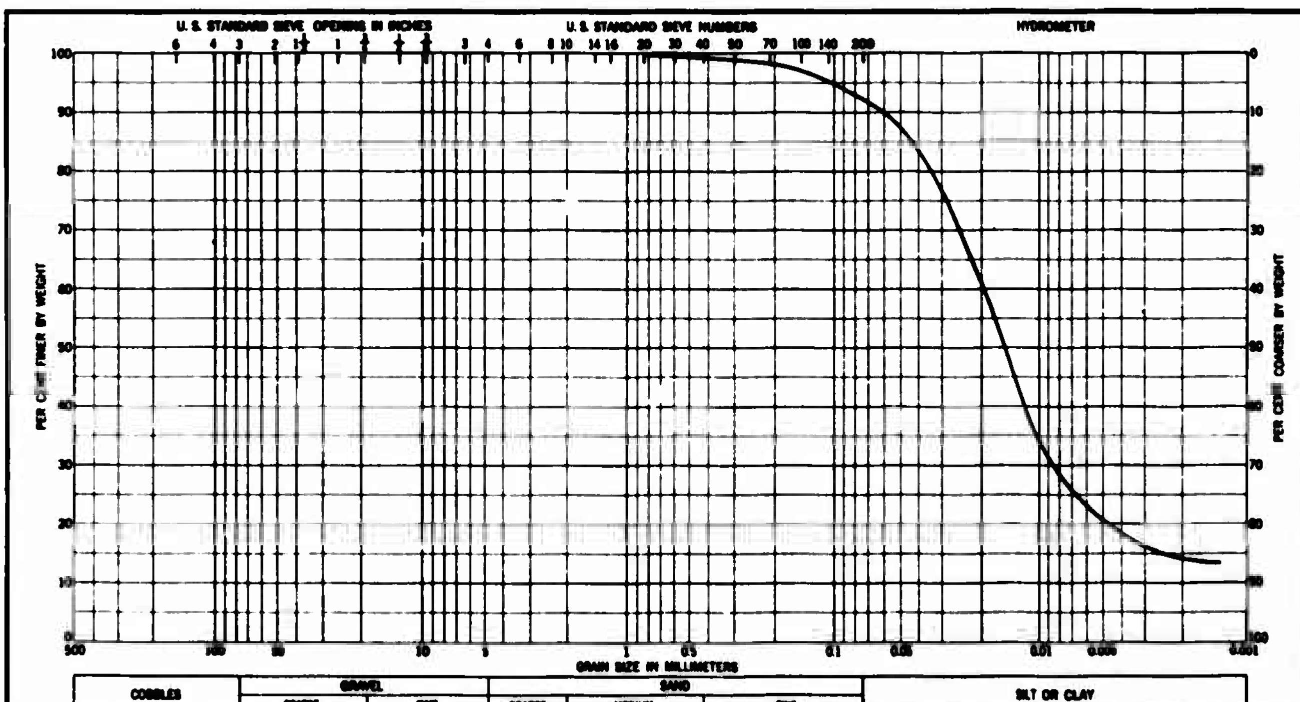
Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS

Area 6, 7, AND 8

Location GRENADA LAKE NO. 1

Date OCT 1963-JAN 1964

GRADATION CURVES



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		CLAYEY SILT (ML)		33	25	8

Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS

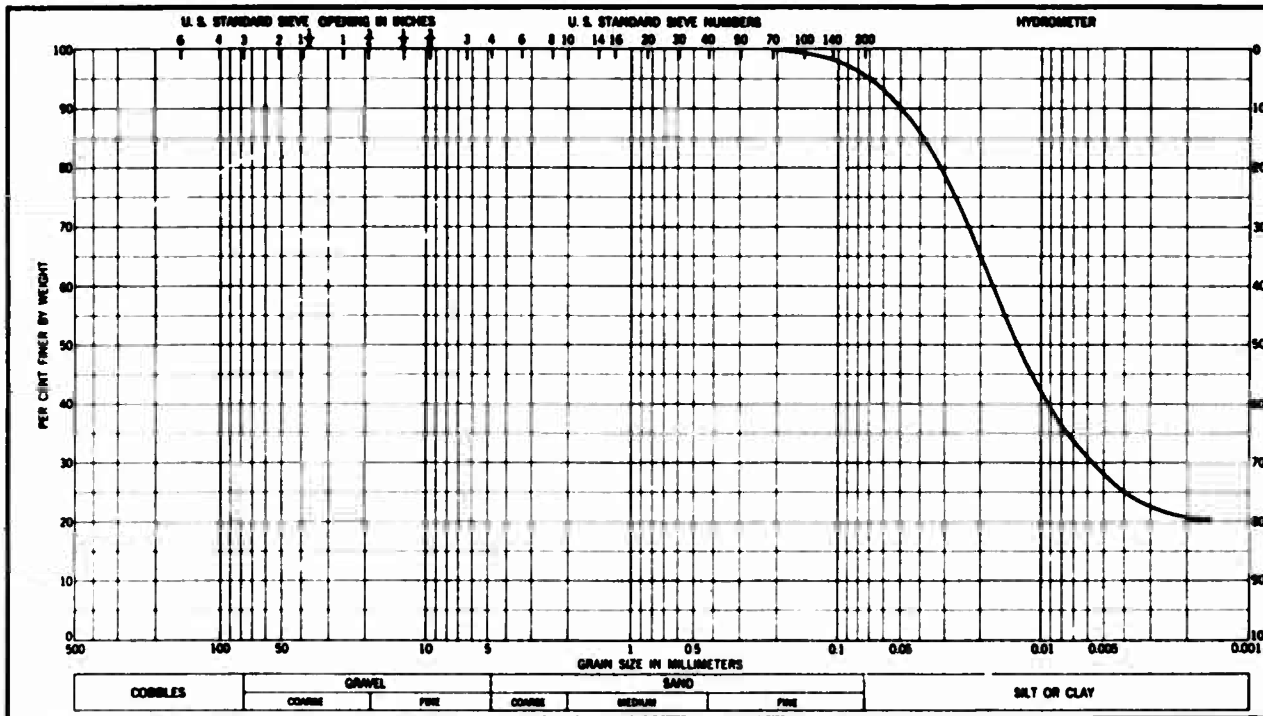
Area 7, 8, 9, 11, AND 16

Location GRENADA LAKE NO. 2

Date JULY 1964-NOV 1964

GRADATION CURVES

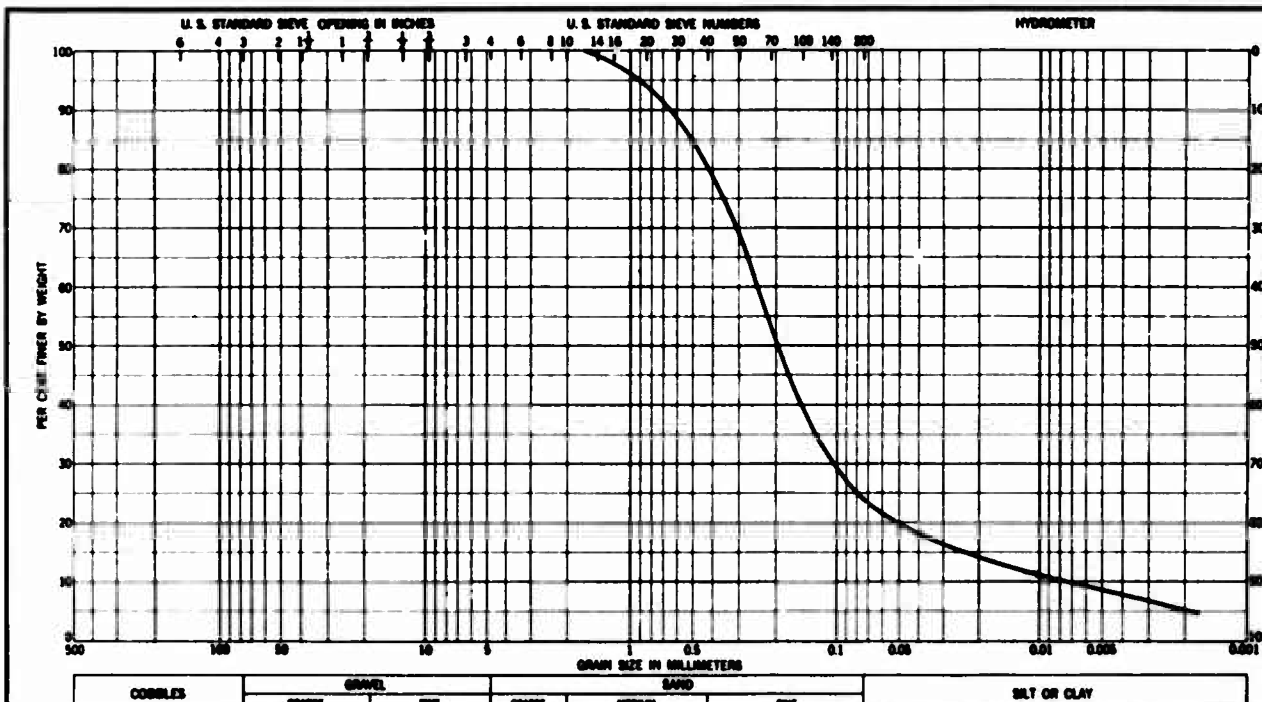
Fig. III-2



Sample No	Elev or Depth	Classification	Nat w %	LL	PL	PI
		SILTY CLAY (CL)		38	24	14

GRADATION CURVES

Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS
Area 10, 12, 13, 14, AND 15
Location GRENADA LAKE NO. 2
Date JULY 1964-NOV 1964

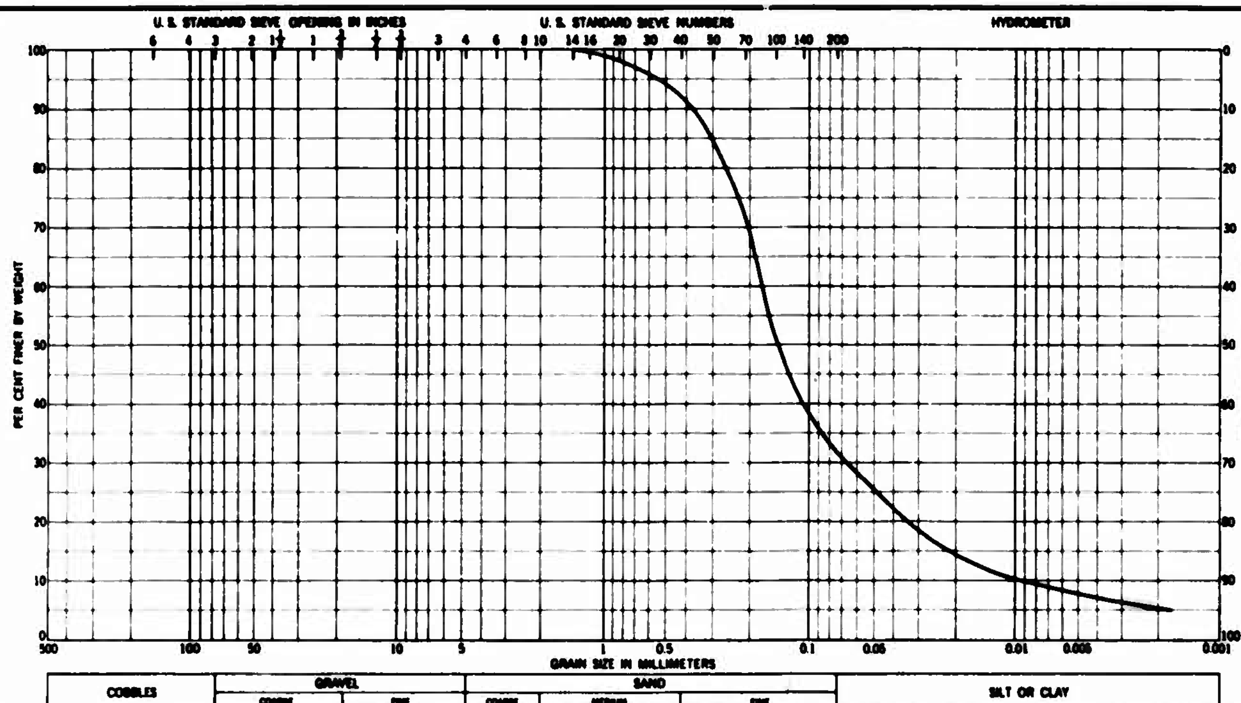


Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		SILTY SAND (SM)		NONPLASTIC		

GRADATION CURVES

Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS
Area 1 AND 2
Location FORT STEWART, GA.
Date MAR 1964-APRIL 1964

Fig. III-3



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
		SILTY SAND (SM)		NONPLASTIC		

Project EFFECTS OF SOIL CONSISTENCY ON VEHICLE PERFORMANCE - 1 PASS

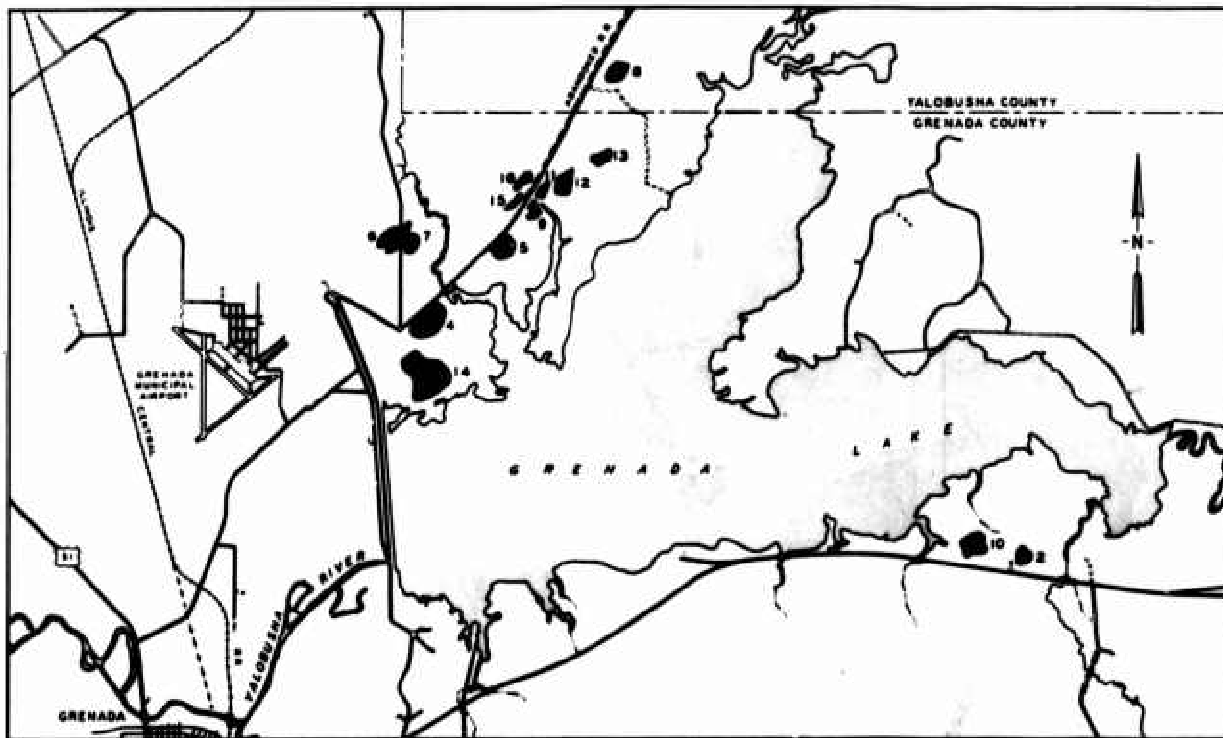
Area 1, 2, 3, 4, 5, AND 6

Location CAMP SHELBY

Date APRIL 1964-MAY 1964

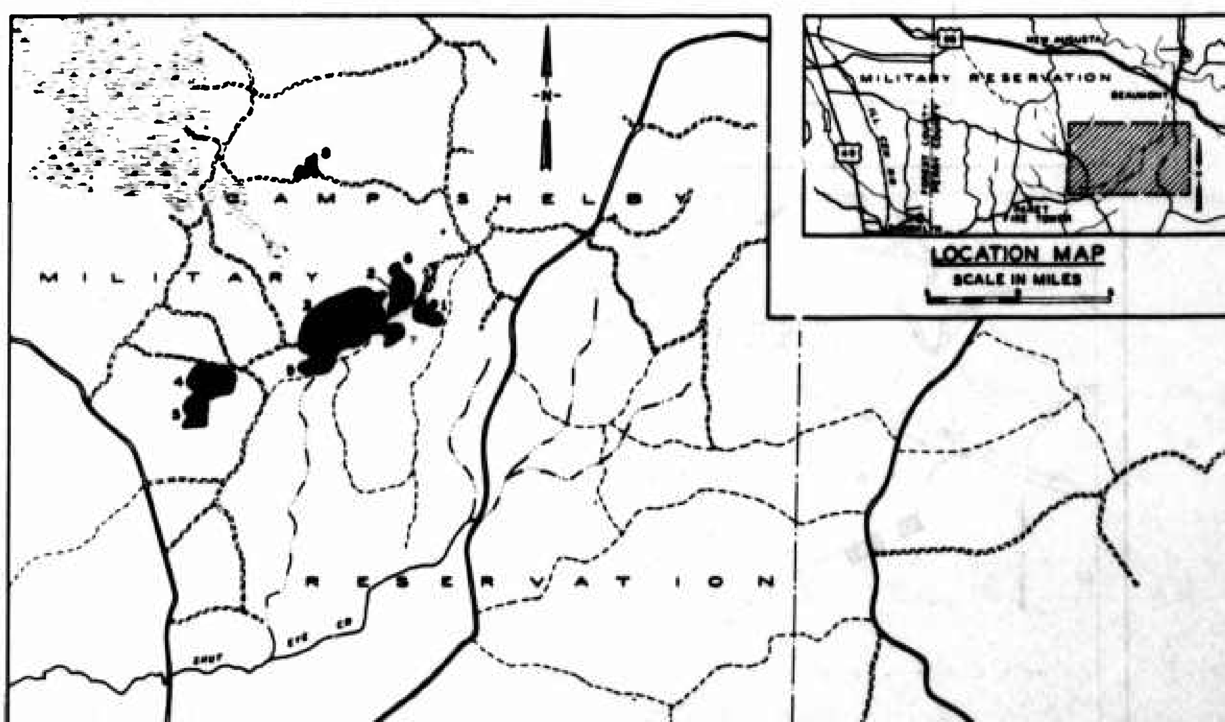
GRADATION CURVES

Fig. III-4



SCALE IN MILES

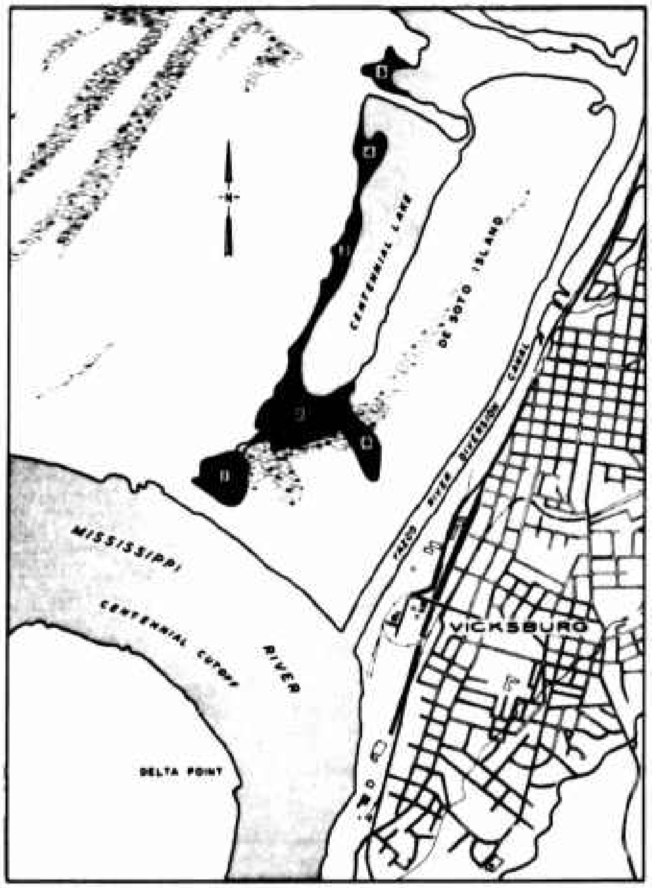
LOCATION OF TEST AREAS
GRENADA LAKE, MISS.



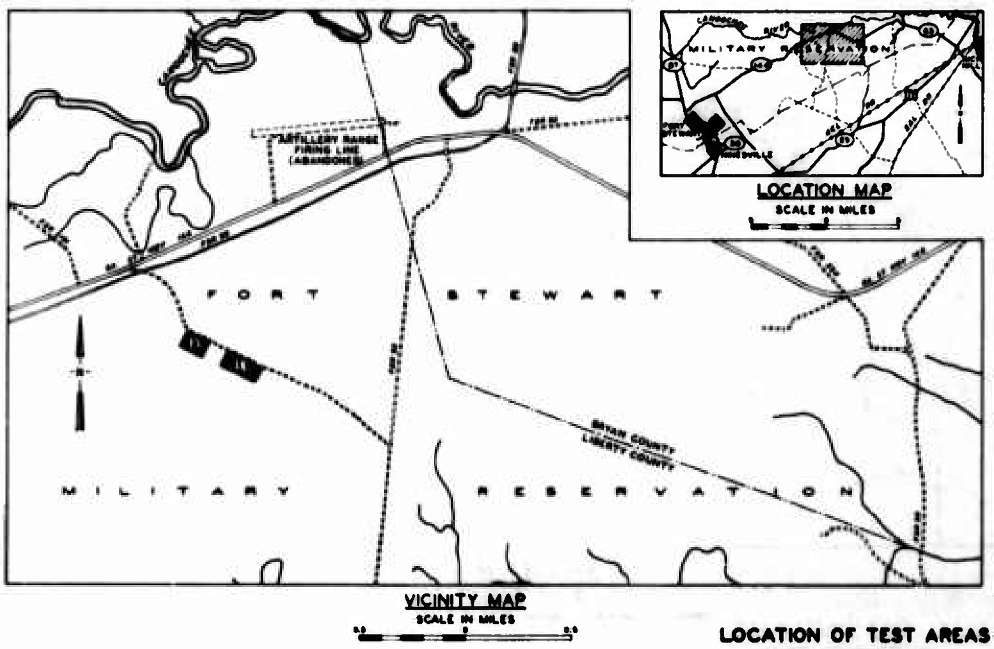
VICINITY MAP.
SCALE IN MILES

LOCATION OF TEST AREAS
CAMP SHELBY. MISS.

Fig. III-5



LOCATION OF TEST AREAS
LAKE CENTENNIAL, MISS.
SCALE IN MILES



LOCATION OF TEST AREAS
FORT STEWART, GA.

Fig. III-6

Table III-1

CODE SHEET FOR TABLES III-3--III-48

Location	Test	Area	Explanation of Code
1	1 thru 127	01 thru 16	Grenada Lake, Miss.
2	1 thru 170	01 thru 09	Camp Shelby, Miss.
3	1 thru 487	01 thru 05	Centennial Lake, Miss.
4	1 thru 40	01 thru 03	Fort Stewart, Ga.

Test Type	Explanation of Code
1	Self-propelled
2	Drawbar pull
3	Turn
4	Speed

Soil Type (USCS)	Explanation of Code
1	CH
2	CL
3	SM
4	ML

Vehicle Code No.	Explanation of Code
1 thru 101	See Table III-2

Pass No.	Explanation of Code
0 thru 51	All pass numbers above zero indicate immobilized pass except pass No. 51 which indicates vehicle was not immobilized.

When the water table of a test area is at the ground level, it is recorded as 000. All water table measurements are in inches.

When three or more nines appear in any column it is understood that the soil data given for that test were collected in undisturbed soil, and that the vehicle data were collected during the first pass.

Usually in a uniform test area one set of soil measurements was made and used in conjunction with several vehicle tests conducted in the area. For this reason soil measurements are repeated for more than one test in the data summary tables.

TABLE III-2

VEHICLE CODE NO. IDENTIFICATION

Vehicle Code No.	Vehicle	Empty Weight lb	Gross Weight lb	Tire Description: Overall Diam in.	Nominal Width in.	Rim Diam in.	Ply Rating	Tire Pressure psi	% Defl	Tire Type	Track Size: Contact Length in.	Contact Width in.	Total Contact Area, sq in
	Wheeled Vehicles												
1	1/2-ton carrier, M274, 4x4	1,190	1,190	16	7.50	10	2	30	6	Std			
2								10	12				
3								5	15				
7	1/2-ton carrier, M274, 4x4	1,190	1,940	16	7.50	10	2	30	10	Std			
9								10	21				
11								5	35				
13	1/2-ton carrier, M274, 4x4	1,325	1,325	16	15.00	6	2	15	10	Terra			
15								3	22				
19	1/2-ton carrier, M274, 4x4	1,325	1,940	16	15.00	6	2	15	15	Terra			
22								3	39				
24	1/4-ton utility truck, M151, 4x4	2,275	3,560	16	7.00	16	6	30	12	Std			
27								7.5	35				
29	1/4-ton utility truck, M151, 4x4 (mod)	[illegible],405	3,560	16	7.00	16	6	30	12	Std			
31								15	20				
35	1/4-ton utility truck, M151, 4x4 (mod)	2,420	3,560	20	9.00	14	2	30	15	Buffed			
36								20	19				
40	1/4-ton utility truck, M151, 4x4 (mod)	2,950	3,560	36	20.00	14	4	15	6	Terra			
41								3	15				
45	3/4-ton cargo truck, M37, 4x4	6,175	7,240	20	9.00	16	8	30	13	Std			
46								20	15				
47								15	20				
49								6.5	35				
51	3/4-ton cargo truck, M37, 4x4 (mod)	6,150	7,240	46	18.00	16	4	15	10	Terra			
53								3	25				
56	2-1/2-ton cargo truck, M35A1, 6x6	13,475	19,410	20	11.00	20	12	35.5	15	Std			
58								13	35				
101	1/4-ton utility truck, M38A1, 4x4	2,720	3,560	16	6.00	16	4	11.6	35	Std			
	Tracked Vehicles												
60	Dinah II, 1/2-ton floater	4,095	4,095								80	20	3200
62	Dinah II, 1/2-ton floater	4,095	4,975								80	20	3200
64	Amphibious cargo carrier, M29C	4,960	4,960								78	20	3120
66	Amphibious cargo carrier, M29C	4,960	5,960								78	20	3120
70	Amphibious cargo carrier, M29C	4,960	5,960								78	12	1872
72	Std D4 engineer tractor without blade	--	12,420								62	13	1612
73	Std D4 engineer tractor with blade	--	14,870								62	13	1612
74	Std D4 engineer tractor without blade	--	13,580								62	24	2976
76	Polecat, model 941	10,555	12,580								156	20	6240
77	Polecat, model 941	10,555	13,140								156	20	6240
83	Hi-speed tractor, M5A4	24,800	28,350								117-1/2	17	3978
85	90-mm self-propelled gun, M56	13,760	15,500								93	20	3720
88	Armored personnel carrier, M113	22,900	22,900								105	15	3150
90	Armored personnel carrier, M114	14,750	14,750								102	16-1/2	3365
92	Amphibious cargo carrier, M116	8,435	8,435								98	20	3920
94	Amphibious cargo carrier, M116	8,435	10,610								98	20	3920
96	Combat tank, M41	45,000	45,000								128	21	5376
98	Armored personnel carrier, M59	42,870	42,870								143	21	6006
100	Combat tank, M48A1	98,400	98,400								157-1/2	28	8820

Table III-3

Loc. Test and Area	Test Type	Soil Type	Veh Code No.	Penetrometer Type: Staff Size	Penetrometer Type: Cone Size	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI Avg 0-6	CI Avg 3-9	CI Avg 6-12	CI Avg 9-15	CI Avg 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	Pass No.	Remarks
1 100	1	4	47	0.025	0.50	14	42	90	98	62	88	88	99	110	33	53	60	62	[illegible]	[illegible]	[illegible]	0.42	9.99	9.99	16	[illegible]	25	999	999	[illegible]	[illegible] silt, [illegible] wet, [illegible]
1 100	1	4	47	0.025	0.50	21	32	33	48	92	88	98	130	175	28	39	42	93	[illegible]	[illegible]	[illegible]	0.99	9.99	9.99	[illegible]	[illegible]	999	999	999	1	
1 200	1	4	47	0.025	0.50	18	48	98	98	71	88	98	98	98	41	55	64	72	[illegible]	[illegible]	[illegible]	0.34	9.99	9.99	13	[illegible]	[illegible]	999	999	[illegible]	
1 200	1	4	47	0.025	0.50	18	38	76	96	118	118	140	181	283	46	72	94	188	[illegible]	[illegible]	[illegible]	0.99	9.99	9.99	[illegible]	[illegible]	999	999	999	7	
1 304	2	4	47	0.025	0.50	44	136	98	79	86	77	138	158	210	85	95	82	79	[illegible]	[illegible]	[illegible]	0.60	9.99	9.99	22	[illegible]	40	999	999	[illegible]	
1 404	2	4	47	0.025	0.50	92	124	94	70	86	78	144	218	248	87	95	92	88	[illegible]	[illegible]	[illegible]	0.35	9.99	9.99	17	33	[illegible]	999	999	[illegible]	wet, [illegible]
1 504	2	4	47	0.025	0.50	54	170	70	98	88	132	158	180	234	101	105	78	98	[illegible]	[illegible]	[illegible]	0.33	9.99	9.99	13	33	45	999	999	2	
1 604	2	4	47	0.025	0.50	40	150	124	94	98	98	160	188	212	105	123	109	97	[illegible]	[illegible]	[illegible]	0.38	9.99	9.99	21	[illegible]	37	999	999	[illegible]	
1 704	2	4	47	0.025	0.50	34	176	113	98	98	114	180	188	193	108	127	101	98	[illegible]	[illegible]	[illegible]	0.40	9.99	9.99	[illegible]	[illegible]	40	999	999	[illegible]	
1 804	1	4	47	0.025	0.50	26	84	71	70	88	137	114	122	132	61	77	79	91	[illegible]	[illegible]	[illegible]	0.40	9.99	9.99	17	33	38	999	999	[illegible]	[illegible] silt, [illegible] wet, [illegible] veg.
1 804	1	4	47	0.025	0.50	18	42	81	83	132	136	134	154	196	40	62	81	103	[illegible]	[illegible]	[illegible]	0.40	9.99	9.99	999	999	999	999	999	3	
1 904	1	4	47	0.025	0.50	28	118	78	74	76	98	138	138	188	61	81	75	79	[illegible]	[illegible]	[illegible]	0.40	9.99	9.99	20	33	38	999	999	[illegible]	[illegible] silt, [illegible] wet, [illegible]
1 904	1	4	47	0.025	0.50	14	28	38	98	112	130	110	114	114	38	56	84	111	[illegible]	[illegible]	[illegible]	0.54	9.99	9.99	999	999	999	999	999	8	wet, no veg.
1 1000	1	4	47	0.025	0.50	22	48	98	98	98	98	88	118	111	40	56	64	72	[illegible]	[illegible]	[illegible]	0.34	9.99	9.99	30	34	35	999	999	[illegible]	[illegible] silt, [illegible] wet, [illegible]
1 1000	1	4	47	0.025	0.50	17	28	48	88	98	98	118	118	142	39	41	48	97	[illegible]	[illegible]	[illegible]	0.43	9.99	9.99	[illegible]	[illegible]	[illegible]	999	999	8	
1 1100	1	4	47	0.025	0.50	16	38	38	88	84	88	130	118	118	29	36	39	78	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	20	[illegible]	24	999	999	C	
1 1100	1	4	47	0.025	0.50	14	28	38	88	88	88	118	138	184	29	39	48	78	[illegible]	[illegible]	[illegible]	0.30	9.99	9.99	20	999	999	999	999	1	
1 1200	1	4	47	0.025	0.50	34	28	38	88	88	97	88	178	238	29	39	39	53	[illegible]	[illegible]	[illegible]	0.38	9.99	9.99	14	22	30	999	999	[illegible]	[illegible] silt, [illegible] spreading, [illegible] wet, no veg.
1 1200	1	4	47	0.025	0.50	20	21	38	81	74	78	78	148	178	28	40	48	75	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	999	[illegible]	30	999	999	4	
1 1300	2	4	47	0.025	0.50	40	142	98	76	97	181	217	288	301	90	99	[illegible]	105	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	27	58	48	999	999	3	[illegible] wet, no veg.
1 1300	2	4	47	0.025	0.50	40	142	98	76	97	181	217	288	301	90	99	[illegible]	105	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	27	58	48	999	999	99	
1 1300	2	4	47	0.025	0.50	40	142	98	76	97	181	217	288	301	90	99	[illegible]	105	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	27	58	48	999	999	99	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	[illegible]	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	99	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	99	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	99	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	99	
1 1400	2	4	47	0.025	0.50	31	154	181	98	99	114	188	177	194	95	113	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.49	9.99	9.99	19	45	43	999	999	99	
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	3	[illegible] wet, no veg.
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	99	
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	99	
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	99	
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	99	
1 1504	2	4	47	0.025	0.50	10	138	138	131	116	188	138	178	184	85	124	118	183	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	21	36	46	999	999	99	
1 1600	2	4	47	0.025	0.50	14	98	98	98	94	78	98	188	184	62	83	83	85	[illegible]	[illegible]	[illegible]	0.38	9.99	9.99	25	51	30	999	999	99	[illegible] wet, no veg.
1 1700	2	4	47	0.025	0.50	14	97	98	98	94	74	84	188	188	45	62	64	67	[illegible]	[illegible]	[illegible]	0.47	9.99	9.99	23	23	38	999	999	99	
1 1807	2	4	47	0.025	0.50	20	98	138	138	78	78	138	188	246	84	116	111	91	[illegible]	[illegible]	[illegible]	0.28	9.99	9.99	24	34	31	999	999	99	
1 1907	2	4	47	0.025	0.50	20	130	84	81	78	81	127	188	188	73	96	84	76	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	28	23	27	999	999	99	
1 2007	2	4	47	0.025	0.50	20	98	138	138	72	71	132	188	188	66	91	[illegible]	81	[illegible]	[illegible]	[illegible]	0.34	9.99	9.99	26	13	38	999	999	99	[illegible] parallel [illegible] test 15, [illegible] wet, no veg.
1 2107	2	4	47	0.025	0.50	22	98	98	74	92	97	138	188	181	69	88	81	81	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	27	21	38	999	999	99	13.
1 2207	2	4	47	0.025	0.50	27	118	118	70	88	98	118	188	201	86	98	98	87	[illegible]	[illegible]	[illegible]	0.34	9.99	9.99	28	24	29	999	999	99	[illegible] wet, no veg.
1 2307	2	4	47	0.025	0.50	20	118	107	70	61	98	90	108	220	83	99	38	84	[illegible]	[illegible]	[illegible]	0.36	9.99	9.99	17	11	32	999	999	99	
1 2407	2	4	47	0.025	0.50	30	92	94	94	99	104	130	187	221	65	74	72	84	[illegible]	[illegible]	[illegible]	0.32	9.99	9.99	21	16	28	999	999	99	Parrallel to test 22, [illegible] wet, no veg.
1 2507	2	4	47	0.025	0.50	37	116	98	92	78	108	130	188	204	83	94	82	84	[illegible]	[illegible]	[illegible]	0.30	9.99	9.99	17	16	38	999	999	99	23.
1 2600	2	4	66	0.025	0.50	14	43	74	88	64	98	98	118	174	44	88	67	84	[illegible]	[illegible]	[illegible]	0.30	9.99	9.99	23	27	24	999	999	99	Parrallel to test 28 & 29, same [illegible] water, no veg.
1 2700	2	4	66	0.025	0.50	14	38	68	58	48	98	78	94	138	37	98	55	93	[illegible]	[illegible]	[illegible]	0.30	9.99	9.99	20	29	21	999	999	99	
1 2800	2	4	66	0.025	0.50	18	42	68	68	62	76	100	104	170	41	98	62	87	[illegible]	[illegible]	[illegible]	0.34	9.99	9.99	21	25	22	999	999	99	[illegible] 26 & 27 [illegible]
1 2800	2	4	66	0.025	0.50	18	42	68	62	62	76	100	184	170	41	98	62	87	[illegible]	[illegible]	[illegible]	0.30	9.99	9.99	21	29	22	999	999	99	

Loc. Test and Area	Moisture Content, Percent Dry Wt 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	Density, lb/cu ft 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
1 100	999.9	40.0	[illegible]	999.9	40.9	34.9	999.9	999.9	999.9	999.9	66.8	77.5	999.9	78.0	84.4	999.9	999.9	999.9	999.9
1 100	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 200	999.9	43.2	40.9	999.9	40.9	33.9	999.9	999.9	999.9	999.9	74.9	76.3	999.9	77.5	87.7	999.9	999.9	999.9	999.9
1 200	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 304	999.9	33.6	34.7	999.9	34.4	36.1	999.9	999.9	999.9	999.9	92.8	86.1	999.9	86.3	84.6	999.9	999.9	999.9	999.9
1 404	999.9	31.3	30.6	999.9	32.4	32.1	999.9	999.9	999.9	999.9	86.2	90.1	999.9	85.6	88.1	999.9	999.9	999.9	999.9
1 504	999.9	31.5	33.0	999.9	33.9	33.2	999.9	999.9	999.9	999.9	86.7	86.4	999.9	86.2	88.4	999.9	999.9	999.9	999.9
1 604	999.9	32.5	30.5	999.9	20.1	30.0	999.9	999.9	999.9	999.9	83.9	86.5	999.9	86.6	89.0	999.9	999.9	999.9	999.9
1 704	999.9	31.7	30.0	999.9	30.5	30.9	999.9	999.9	999.9	999.9	86.6	90.6	999.9	86.5	87.2	999.9	999.9	999.9	999.9
1 804	999.9	36.9	33.0	999.9	32.4	32.4	999.9	999.9	999.9	999.9	80.4	84.7	999.9	86.4	87.3	999.9	999.9	999.9	999.9
1 804	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 904	999.9	33.2	31.5	999.9	35.5	30.6	999.9	999.9	999.9	999.9	85.7	88.5	999.9	85.1	88.3	999.9	999.9	999.9	999.9
1 904	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 1004	999.9	49.2	42.6	999.9	40.6	41.5	999.9	999.9	999.9	999.9	68.4	76.9	999.9	76.3	77.9	999.9	999.9	999.9	999.9
1 1004	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 1100	999.9	47.3	48.0	999.9	41.0	37.4	999.9	999.9	999.9	999.9	69.3	71.6	999.9	78.1	80.2	999.9	999.9	999.9	999.9
1 1100	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 1200	999.9	37.6	44.3	999.9	44.1	35.7	999.9	999.9	999.9	999.9	78.3	77.9	999.9	76.4	81.5	999.9	999.9	999.9	999.9
1 1200	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
1 1300	999.9	34.2	32.2	999.9	35.3	34.4	999.9	999.9	999.9	999.9	83.3	86.9	999.9	80.0	88.8	999.9	999.9	999.9	999.9
1 1300	999.9	34.2	32.2	999.9	35.3	34.4	999.9	999.9	999.9	999.9	83.3	86.9	999.9	80.0	88.8	999.9	999.9	999.9	999.9
1 1300	999.9	34.2	32.2	999.9	35.3	34.4	999.9	999.9	999.9	999.9	83.3	86.9	999.9	80.0	88.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.6	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.4	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.4	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.4	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.4	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1400	999.9	33.0	30.4	999.9	34.1	31.6	999.9	999.9	999.9	999.9	83.0	90.2	999.9	84.6	100.8	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1504	999.9	32.2	29.2	999.9	30.1	24.7	999.9	999.9	999.9	999.9	91.0	90.1	999.9	999.9	92.3	999.9	999.9	999.9	999.9
1 1600	999.9	34.0	29.9	999.9	30.2	27.9	999.9	999.9	999.9	999.9	82.0	92.4	999.9	78.9	81.1	999.9	999.9	999.9	999.9
1 1700	999.9	30.0	33.0	999.9	37.2	25.8	999.9	999.9	999.9	999.9	86.2	86.2	999.9	87.2	83.4	999.9	999.9	999.9	999.9
1 1807	999.9	32.6	33.2	999.9	33.7	27.4	999.9	999.9	999.9	999.9	86.3	87.4	999.9	84.6	93.8	999.9	999.9	999.9	999.9
1 1907	999.9	41.0	39.3	999.9	35.4	30.3	999.9	999.9	999.9	999.9	86.3	87.4	999.9	84.6	93.8	999.9	999.9	999.9	999.9
1 2007	999.9	39.9	39.4	999.9	35.5	30.3	999.9	999.9	999.9	999.9	82.3	84.0	999.9	85.8	88.8	999.9	999.9	999.9	999.9
1 2107	999.9	40.1	38.3	999.9	35.4	31.4	999.9	999.9	999.9	999.9	73.9	84.0	999.9	87.1	89.9	999.9	999.9	999.9	999.9
1 2207	999.9	37.0	33.0	999.9	33.4	31.8	999.9	999.9	999.9	999.9	79.0	86.4	999.9	87.9	89.9	999.9	999.9	999.9	999.9
1 2307	999.9	36.3	34.4	999.9	35.1	29.5	999.9	999.9	999.9	999.9	80.3	82.3	999.9	85.9	79.7	999.9	999.9	999.9	999.9
1 2407	999.9	37.0	33.0	999.9	33.4	33.8	999.9	999.9	999.9	999.9	80.3	82.3	999.9	85.9	79.7	999.9	999.9	999.9	999.9
1 2507	999.9	36.3	34.4	999.9	35.3	29.5	999.9	999.9	999.9	999.9	80.3	82.3	999.9	85.9	79.7	999.9	999.9	999.9	999.9
1 2606	999.9	34.3	39.6	999.9	30.7	29.8	999.9	999.9	999.9	999.9	64.2	79.5	999.9	78.8	95.4	999.9	999.9	999.9	999.9
1 2706	999.9	44.6	47.3	999.9	55.1	30.8	999.9	999.9	999.9	999.9	56.0	70.7	999.9	85.5	77.4	999.9	999.9	999.9	999.9
1 2800	999.9	39.3	39.6	999.9	30.7	29.8	999.9	999.9	999.9	999.9	56.0	70.7	999.9	85.5	77.4	999.9	999.9	999.9	999.9
1 2806	999.9	39.3	39.6	999.9	30.7	29.8	999.9	999.9	999.9	999.9	56.0	70.7	999.9	85.5	77.4	999.9	999.9	999.9	999.9

Loc. Test and Area	Shear-Graph Vane Cu	Vane Tan Phi	Number A	Number Tan Alpha	Rut Depth LT	Rut Depth RT	Rut Width LT	Rut Width RT	Depth Water Table	C	D/W	B	D/B	Slip Pcnt
1 100	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 100	99.9	9.99	99.9	9.99	5.5	5.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 200	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 200	99.9	9.99	99.9	9.99	5.9	5.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 304	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1220	0.17	99999	99999	[illegible]
1 404	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1180	0.14	99999	99999	[illegible]
1 504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1200	0.14	99999	99999	43
1 604	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1200	0.14	99999	99999	[illegible]
1 704	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	4
1 804	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 804	99.9	9.99	99.9	9.99	15.0	11.9	99.9	99.9	5.5	99999	9.99	99999	99999	999
1 904	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 904	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 1004	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
1 1004	99.9	9.99	99.9	9.99	5.3	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 1100	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 1100	99.9	9.99	99.9	9.99	10.1	15.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 1200	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 1200	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	1.5	99999	9.99	99999	99999	999
1 1300	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1400	0.19	99999	99999	[illegible]
1 1300	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1260	0.17	99999	99999	[illegible]
1 1300	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1300	0.18	99999	99999	[illegible]
1 1400	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	99999	99999	4
1 1400	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.12	99999	99999	11
1 1400	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.15	99999	99999	13
1 1490	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.15	99999	99999	[illegible]
1 1400	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1120	0.13	99999	99999	[illegible]
1 1400	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.13	99999	99999	[illegible]
1 1504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1400	0.23	99999	99999	[illegible]
1 1594	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1400	0.22	99999	99999	[illegible]
1 1504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1500	0.21	99999	99999	18
1 1504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.07	99999	99999	4
1 1504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.12	99999	99999	11
1 1504	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1130	0.14	99999	99999	16
1 1600	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	200	0.23	99999	99999	17
1 1700	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	150	0.02	99999	99999	[illegible]
1 1807	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.08	3129	99999	22
1 1907	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.09	[illegible]	99999	41
1 2007	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.28	[illegible]	99999	35
1 2107	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	350	0.27	[illegible]	99999	19
1 2207	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.29	[illegible]	99999	18
1 2307	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.28	3312	99999	[illegible]
1 2407	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.15	[illegible]	99999	42
1 2507	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.29	3139	99999	15
1 2606	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.31	[illegible]	99999	[illegible]
1 2706	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.23	[illegible]	99999	47
1 2800	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]		[illegible]	99999	42
1 2806	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	0.26	[illegible]	99999	46

Table III-4

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VSM CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	2	4	66	[illegible]	0.50	17	44	[illegible]	[illegible]	[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.40	9.99	9.99	[illegible]	24	31	999	999	99	Parallel to test 26427, same SFC water, no veg.
[illegible]	2	4	66	[illegible]	0.50	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41	9.99	9.99	19	22	[illegible]	999	999	99	
[illegible]	2	4	66	[illegible]	0.50	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41	9.99	9.99	19	22	[illegible]	999	999	99	
[illegible]	2	4	66	[illegible]	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	13	22	23	999	999	99	SFC wet, no veg.
[illegible]	2	4	66	[illegible]	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.39	9.99	9.99	13	22	23	999	999	99	
[illegible]	2	4	66	[illegible]	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	[illegible]	[illegible]	[illegible]	999	999	99	SFC wet, no veg.
[illegible]	2	4	66	[illegible]	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	[illegible]	[illegible]	[illegible]	999	999	99	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	999	999	99	SFC wet, no veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	999	999	99	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	99	SFC wet, no veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	130	115	110	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	SFC wet, no veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	SFC wet, no veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	193	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	193	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	47	999	999	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	100% slip due to slipperiness & sinkage, dragging on 23rd pass & tilting to rt, veg. 80% NW (1/4" or less [grass]) test area in trees.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	100% slip due to slipperiness & sinkage, tilting to lt, veg. 80% NA (1/4" or less [grass]) test area in trees.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	100% slip due to sliperiness & sinkage, no dragging, tilting to lt, SFC damp. Test area in trees, veg. 80% NW (1/4" or less [grass])
[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	100% slip due to slipperiness & sinkage, dragging on 13th pass. Tilting to rt, SFC damp, test area in trees. Veg 80% NW (1/2" or less [grass])
[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77	109	126	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	17	
[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	[illegible]	8	100% slip due to slipperiness only, no draging or tilting, SFC damp, test area in trees. Veg. 80% NW (1/2" or less [grass])
[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	0-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	0-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/W	B	B/R	SLIP DONT
[illegible]	999.9	[illegible]	[illegible]	999.9	46.5	29.3	999.9	999.9	999.9	999.9	66.8	77.9	999.9	72.9	84.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1590	0.20	[illegible]	99999	[illegible]
[illegible]	999.9	[illegible]	[illegible]	999.9	36.7	32.2	999.9	999.9	999.9	999.9	74.4	[illegible]	999.9	72.9	87.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	[illegible]
[illegible]	999.9	[illegible]	[illegible]	999.9	36.7	32.2	999.9	999.9	999.9	999.9	74.4	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	[illegible]
[illegible]	999.9	[illegible]	[illegible]	[illegible]	36.2	31.4	999.9	999.9	999.9	999.9	71.4	[illegible]	999.9	81.4	[illegible]	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1618	0.27	[illegible]	99999	[illegible]
[illegible]	999.9	[illegible]	[illegible]	[illegible]	36.2	31.4	999.9	999.9	999.9	999.9	71.4	[illegible]	999.9	81.4	[illegible]	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1618	0.27	[illegible]	99999	[illegible]
[illegible]	[illegible]	37.1	37.2	[illegible]	[illegible]	33.3	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	83.7	85.2	999.9	999.9	999.9	999.9	7.0	0.27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.1	3.0	[illegible]	[illegible]	15.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	[illegible]	[illegible]	15.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	84.2	26.9	28.3	[illegible]	37.4	30.8	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	78.3	[illegible]	999.9	999.9	999.9	999.9	3.0	0.27	1.9	0.36	[illegible]	[illegible]	[illegible]	[illegible]	15.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	3.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.1	11.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	55.1	43.0	35.8	[illegible]	33.9	33.3	999.9	999.9	999.9	999.9	72.4	79.4	999.9	82.0	81.7	999.9	999.9	999.9	999.9	3.2	0.36	1.2	0.51	99.9	99.9	[illegible]	[illegible]	15.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	1.0	[illegible]	[illegible]	15.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-5

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
1 0010	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23	33	31	73	100	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	4	100% slip due to slipperiness only, no drag or tilt, SFC damp, test area in trees; veg 80% NW (1" or less [grass])
1 0010	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33	[illegible]	[illegible]	[illegible]	66	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	36	0	
1 0010	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	[illegible]	[illegible]	35	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	1	
1 0010	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	[illegible]	4	
1 0110	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	51	59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	11	11	[illegible]	999	44	0	100% slip due to sinkage only, no tilting; SFC damp; veg 80% NW (1" or less [grass])
1 0110	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	1	
1 0110	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	7	
1 0210	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	91	0	100% slip due to sinkage only; dragging on 18th pass; tilting to 1st; SFC damp; veg 80% NW (1" or less [grass])
1 0210	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	
1 0210	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	10	
1 0210	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	20	
1 0210	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	30	
1 0310	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	16	0	100% slip due to sinkage only; no dragging or tilting; SFC damp; test area in trees; veg 80% NW (1" or less [grass])
1 0310	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	
1 0310	1	[illegible]	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	7	
1 0409	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	20	[illegible]	[illegible]	999	999	0	100% slip due to sinkage only; near test 1&2; hard clay pan at 15-18"; SFC damp but cracked; test area in trees; veg 40% NW (1" or less [grass])
1 0409	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	[illegible]	[illegible]	999	999	1	
1 0409	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	165	212	233	242	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	[illegible]	[illegible]	999	999	3	
1 0909	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	18	[illegible]	[illegible]	999	31	0	100% slip due to sinkage only, parallel to test 10; veg 40% NW (1" or less [grass])
1 0909	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	1	
1 0909	1	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	999	3	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	89	[illegible]	999	42	99	SFC traction study; SFC damp; veg 80% NW (1" or less [grass])
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	89	[illegible]	999	42	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	89	[illegible]	999	42	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	[illegible]	999	53	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	[illegible]	999	53	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	[illegible]	999	53	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	[illegible]	999	53	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	[illegible]	999	53	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	108	[illegible]	999	92	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	108	[illegible]	999	92	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	108	[illegible]	999	92	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	108	[illegible]	999	92	99	
1 6011	2	[illegible]	[illegible]	0.375	0.50	[illegible]	[illegible]	257	150	130	160	239	999	999	[illegible]	234	[illegible]	147	176	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	108	[illegible]	999	92	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	90	[illegible]	999	46	99	SFC traction study; SFC damp; veg 80% NW (1" or less [grass])
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	90	[illegible]	999	46	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	90	[illegible]	999	46	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	90	[illegible]	999	46	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	[illegible]	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	0.30	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	0.30	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.34	9.99	0.30	[illegible]	73	68	999	58	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	109	84	999	100	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	109	84	999	100	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	109	84	999	100	99	
1 6711	2	[illegible]	101	0.375	0.50	[illegible]	[illegible]	261	163	135	177	267	999	999	[illegible]	236	[illegible]	158	193	[illegible]	[illegible]	0.40	9.99	[illegible]	[illegible]	109	84	999	100	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	8	A/R	SLIP CENT
1 0010	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
1 0010	50.0	42.9	34.9	[illegible]	31.6	34.1	999.9	999.9	999.9	999.9	73.6	81.1	999.9	88.0	86.2	999.9	999.9	999.9	999.9	3.2	0.36	1.2	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0010	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0010	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0110	57.3	35.1	29.5	[illegible]	34.8	31.6	999.9	999.9	999.9	999.9	82.1	86.2	999.9	80.4	86.7	999.9	999.9	999.9	999.9	3.9	0.40	1.0	0.55	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0110	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0110	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	8.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0210	38.4	38.1	28.3	[illegible]	28.6	27.4	999.9	999.9	999.9	999.9	76.4	80.4	999.9	88.0	85.2	999.9	999.9	999.9	999.9	3.9	0.40	1.0	0.55	99.9	99.9	99.9	99.9	6.0	99999	9.99	99999	99999	999
1 0210	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	6.0	99999	9.99	99999	99999	999
1 0210	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	3.0	99.9	99.9	6.0	99999	9.99	99999	99999	999
1 0210	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	5.0	99.9	99.9	6.0	99999	9.99	99999	99999	999
1 0210	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	6.0	99999	9.99	99999	99999	999
1 0310	46.8	33.0	37.1	[illegible]	35.0	34.6	999.9	999.9	999.9	999.9	82.8	80.3	999.9	83.6	82.1	999.9	999.9	999.9	999.9	4.2	0.36	0.7	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0310	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0310	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0409	48.2	42.4	31.6	[illegible]	28.8	27.8	999.9	999.9	999.9	999.9	74.6	86.1	999.9	89.5	90.9	999.9	999.9	999.9	999.9	4.2	0.36	0.7	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0409	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0409	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0909	44.0	37.3	30.9	[illegible]	29.4	27.7	999.9	999.9	999.9	999.9	77.9	85.0	999.9	88.1	88.4	999.9	999.9	999.9	999.9	4.2	0.36	0.7	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0909	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 0909	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9	0.50	1.5	0.49	99.9	99.9	99.9	99.9	99.9	500	[illegible]	600	99999	3
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	1900	0.32	1800	99999	11
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2000	0.40	1050	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	3100	0.58	1750	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2000	0.40	1650	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2000	0.40	1700	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.50	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2700	0.40	1079	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2100	0.35	1700	99999	9
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	4000	0.67	2000	99999	34
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2790	0.46	1700	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2400	0.41	1800	99999	41
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2400	0.40	1800	99999	[illegible]
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	3.9	0.59	1.5	0.49	99.9	99.9	99.9	99.9	99.9	2600	0.44	1800	99999	100
1 6711	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.6	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	3.9	0.59	1.0	0.49	99.9	99.9	99.9	99.9	99.9	640	0.18	99999	99999	94
1 6711	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	640	0.18	99999	99999	84
1 6711	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	640	0.18	99999	99999	94
1 6711	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	640	0.18	99999	99999	94
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	800	0.22	99999	99999	87
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	790	0.21	99999	99999	[illegible]
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	800	0.25	99999	99999	95
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.33	99999	99999	64
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	900	0.20	99999	99999	72
1 6711	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	82.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1300	0.30	99999	99999	100
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	730	0.20	99999	99999	9
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	730	0.20	99999	99999	9
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	730	0.20	99999	99999	9
1 6711	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	730	0.20	99999	99999	9

Table III-6

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	SI 0	SI 3	SI 6	SI 9	SI 12	SI 15	SI 18	SI 21	SI 24	SI AVG 0-6	SI AVG 3-9	SI AVG 6-12	SI AVG 9-15	SI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.31	0.38	0.34	9.99	0.24	93	86	67	999	51	99	SFC traction study; SFC damp, veg 80% NW (¼" or less [grass'])
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.31	0.38	0.34	9.99	0.24	93	86	67	999	51	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.31	0.38	0.34	9.99	0.24	93	86	67	999	51	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.31	0.38	0.34	9.99	0.24	93	86	67	999	51	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.27	0.31	0.34	9.99	0.30	92	78	63	999	64	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.27	0.31	0.34	9.99	0.30	92	78	63	999	64	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.27	0.31	0.34	9.99	0.30	92	78	63	999	64	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.27	0.31	0.34	9.99	0.30	92	78	63	999	64	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.27	0.31	0.34	9.99	[illegible]	92	71	63	999	64	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.44	0.44	0.49	9.99	0.32	88	104	83	999	111	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.44	0.44	0.49	9.99	0.32	88	104	83	999	111	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.44	0.44	0.49	9.99	0.32	88	104	83	999	111	99	
1 6011	2	4	40	0.375	0.50	93	273	252	153	149	225	265	999	999	192	226	185	176	213	0.44	0.44	0.49	9.99	0.32	88	104	83	999	111	99	
1 6909	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	206	0.27	0.22	0.23	9.99	0.42	16	27	20	999	87	0	100% slip due to sinkage only; dragging on 30th pass; heavy dragging on 40th pass; veg 30% NW (¼" or less [grass'])
1 6909	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
1 6909	1	4	40	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
1 6909	1	4	40	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	20	
1 6909	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	44	
1 7011	3	4	40	0.375	0.50	69	304	235	232	258	296	312	999	999	169	244	248	262	209	[illegible]	[illegible]	0.39	9.99	9.99	91	99	94	999	999	99	No remarks.
1 7011	3	4	40	0.375	0.50	60	269	240	217	218	248	264	999	999	187	241	228	228	243	[illegible]	[illegible]	0.39	9.99	9.99	48	90	88	999	999	99	
1 7011	3	4	40	0.375	0.50	75	291	241	200	221	253	293	999	999	189	[illegible]	221	225	256	[illegible]	[illegible]	0.39	9.99	9.99	51	98	86	999	999	99	
1 7011	3	4	40	0.375	0.50	63	273	237	174	222	268	291	999	999	181	[illegible]	211	221	260	[illegible]	[illegible]	0.39	9.99	9.99	52	95	82	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	51	60	62	90	137	[illegible]	[illegible]	0.30	9.99	9.99	14	14	24	999	999	99	No veg; test area in trees.
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42	57	73	86	114	[illegible]	[illegible]	0.39	9.99	9.99	11	14	29	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	60	[illegible]	[illegible]	96	153	[illegible]	[illegible]	0.23	9.99	0.88	16	28	88	999	34	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	53	62	68	77	147	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	53	62	74	83	96	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56	69	77	79	79	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	56	69	81	94	97	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49	63	70	59	64	[illegible]	[illegible]	0.33	9.99	0.26	18	11	33	999	17	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57	76	77	74	68	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7109	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	62	78	85	95	136	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	85	82	[illegible]	[illegible]	[illegible]	[illegible]	0.26	9.99	0.20	28	19	21	999	38	0	Made 50 passes with ease; test area in clearing, SFC damp; veg 20% NW (¼" or less [grass'])
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
1 7209	1	4	40	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	13	
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	[illegible]	
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.17	9.99	9.99	18	10	12	21	999	0	100% slip due to sinkage only; slight tilt to rt; no veg.
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
1 7209	1	4	40	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
1 7209	1	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	SFC Traction Study; SFC damp; veg 80% NW (¼" or less [grass']) same area as test 66, 67, & 68.
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.28	9.99	0.30	42	58	37	999	66	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.32	9.99	0.41	38	48	48	999	68	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
1 7411	2	4	40	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	[illegible]	171	[illegible]	[illegible]	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	1-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/W	B	B/R	SLIP PCNT
1 6011	31.0	29.5	30.2	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	89.0	91.5	999.9	88.3	89.0	999.9	999.9	999.9	999.9	2.0	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1200	0.17	3000	99999	17
1 6011	31.0	29.5	30.2	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.0	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1100	0.15	4000	99999	17
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.0	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1230	0.17	4200	99999	17
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	27.9	27.3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.0	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1390	0.14	4100	99999	17
1 6011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.0	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1390	0.14	4800	99999	47
1 6011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.3	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	990	0.13	4800	99999	47
1 6011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.3	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	990	0.13	4800	99999	47
1 6011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.3	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	990	0.13	4800	99999	47
1 6011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.3	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1090	0.14	4800	99999	47
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	88.1	999.9	999.9	999.9	999.9	2.3	0.43	1.0	0.53	99.9	99.9	99.9	99.9	99.9	1370	0.19	9000	99999	48
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	88.1	999.9	999.9	999.9	999.9	2.0	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	2990	0.39	99999	99999	48
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	88.1	999.9	999.9	999.9	999.9	2.0	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	3250	0.48	99999	99999	48
1 6011	[illegible]	[illegible]	[illegible]	[illegible]	26.8	27.6	999.9	999.9	999.9	999.9	93.8	97.3	999.9	96.4	88.1	999.9	999.9	999.9	999.9	2.0	0.40	1.0	0.53	99.9	99.9	99.9	99.9	99.9	3091	0.58	99999	99999	48
1 6909	37.7	[illegible]	[illegible]	[illegible]	31.0	28.7	999.9	999.9	999.9	999.9	71.1	77.8	999.9	86.0	999.9	999.9	999.9	999.9	999.9	1.5	0.40	1.0	0.38	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 6909	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	3.0	1.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 6909	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	3.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 6909	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 6909	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7011	31.4	[illegible]	[illegible]	[illegible]	29.6	38.0	999.9	999.9	999.9	999.9	87.0	89.1	999.9	85.9	89.0	999.9	999.9	999.9	999.9	[illegible]	0.51	0.5	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	7
1 7011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.9	0.51	0.5	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	7
1 7011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	86.5	94.0	999.9	88.9	97.2	999.9	999.9	999.9	999.9	4.9	0.12	3.1	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	7
1 7011	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	4.9	0.12	3.1	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	7
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1400	0.19	99999	99999	46
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1300	0.19	99999	99999	48
1 7109	36.0	44.4	[illegible]	[illegible]	33.8	33.1	999.9	999.9	999.9	999.9	68.5	79.1	999.9	88.4	89.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1300	0.19	99999	99999	47
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1300	0.18	99999	99999	47
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1200	0.18	99999	99999	48
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.15	99999	99999	49
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1090	0.15	99999	99999	47
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	950	0.13	99999	99999	48
1 7109	37.2	[illegible]	[illegible]	[illegible]	33.1	29.4	999.9	999.9	999.9	999.9	72.4	72.2	999.9	84.4	89.3	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	950	0.13	99999	99999	49
1 7109	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7209	40.0	41.7	34.2	[illegible]	31.3	31.5	999.9	999.9	999.9	999.9	74.8	81.4	999.9	81.6	78.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.09	1.7	0.29	3.0	3.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.16	1.5	0.12	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	0.8	99.9	99.9	7.0	99999	9.99	99999	99999	999
1 7209	31.9	48.0	[illegible]	[illegible]	34.8	71.4	999.9	999.9	999.9	999.9	76.3	77.2	999.9	82.8	86.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	5.0	99.9	99.9	7.0	99999	9.99	99999	99999	999
1 7209	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	8.0	99.9	99.9	7.0	99999	9.99	99999	99999	999
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.1	0.37	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1230	0.17	4000	99999	34
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1330	0.14	[illegible]	99999	15
1 7411	33.3	31.7	28.1	[illegible]	31.2	31.1	999.9	999.9	999.9	999.9	84.0	89.1	999.9	88.5	86.2	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1290	0.17	[illegible]	99999	31
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1130	0.16	4800	99999	41
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1230	0.17	[illegible]	99999	[illegible]
1 7411	30.0	30.0	29.1	[illegible]	27.1	27.2	999.9	999.9	999.9	999.9	88.3	95.5	999.9	89.9	88.1	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.0	1130	0.16	4400	99999	65
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.5	1090	0.14	4800	99999	74
1 7411	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.47	2.0	0.29	99.9	99.9	99.9	99.9	22.0	950	0.12	3000	99999	14

Table III-7

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI									CI AVG					RI					RCI					PASS NO.	REMARKS
																				0-6	3-9	6-12	9-15	12-18	0-6	3-9	6-12	9-15	12-18		
																															SFC Traction Study; SFC damp; veg 80% NW (½" or less [grass']) same area as test 66, 67, & 68.
																															SFC Traction Study; SFC damp; veg 80% NW (½" or less [grass']) same area as test 66, 67, & 68.
																															100% slip due to slipperiness & sinkage; tilting to rt; SFC damp; veg 20% NW (½" or less [grass'])
																															100% slip due to slipperiness & sinkage; SFC damp; no dragging; veg 80% NW (½" or less [grass'])
																															100% slip due to slipperiness & sinkage; no dragging; SFC damp; veg 20% NW (½" or less [grass'])
																															100% slip due to sinkage only; SFC damp; veg 80% NW (½" or less [grass'])
																															100% slip due to sinkage; no dragging; SFC damp; veg 80% NW (½" or less [grass'])
																															No veg; SFC damp.
																															No veg; SFC damp.
																															No veg; SFC damp.

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT										DENSITY, LB/CU FT									SHEARGRAPH VANE		RUBBER		RUT DEPTH		RUT WIDTH		DEPTH WATER TABLE	D	D/W	B	B/R	SLIP PCNT
	0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	CU	TAN PHI	AU	TAN ALPHA	LT	RT	LT	RT						

Table III-8

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
																															No veg; SFC damp; parallel to test 84.
																															No veg.
																															No veg; tracks were run in mud before test started.
																															No veg, soil data in area was erratic, 12-18 RI sample liquidfies
																															No vegetation.
																															No vegetation.
																															Vegetation 80% NQ ($\frac{1}{4}$" or less [grass])
																															Vegetation 80% NW ($\frac{1}{4}$" or less [grass])

LOC. TEST AND AREA	[illegible] CONTENT, PERCENT DRY WT 0-6	0-6	3-6	6-6	6-9	9-12	6-12	12-15	15-18	18-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	TAN PHI	RUBBER AU	TAN ALPHA	RUT DEPTH LT	RT	RUT WIDTH LT	RT	DEPTH WATER TABLE	D	D/W	B	B/R	SLIP PCNT

Table III-10

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	0	3	6	9	CI 12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Veg 100% MW (moss)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Veg 100% (moss)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100% slip due to sinkage only; dragging on 9th pass; parallel to test 101; veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100% slip due to sinkage only; dragging on 20th pass; heavy dragging on 40th pass; test parallel to water-filled drainage ditch; veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100% slip due to sinkage; dragging on 9th pass; heavy dragging on 12th pass; SFC damp; veg 100% MW (½" or less)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Vehicle completed 50 passes with ease; SFC damp; parallel to 107, veg 80% MW (½" or less)

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-3	3-6	3-6	6-9	6-9	9-12	6-12	12-15	12-18	18-24	DENSITY, LB/CU FT 0-3	3-6	6-9	6-9	9-12	6-12	12-15	15-18	18-24	SHEARGRAPH VANE CU	VANE TAN PHI	NUMBER CU	NUMBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/W	B	B/R	SLIP POINT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-9

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	RI 0	3	6	9	12	15	18	21	24	RI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
1 9212	2	4	70	0.375	0.50	25	48	38	40	43	52	67	83	142	37	43	40	45	54	0.29	0.35	0.35	9.99	9.99	11	15	14	999	999	99	
[illegible]																														99	Veg 80% NW (½" or less [grass])
[illegible]																														99	Veg 100% NW (½" or less [grass])
[illegible]																														99	Veg 100% NW (½" or less [grass])
[illegible]																														99	No remarks.
[illegible]																														1	100% slip due to slipperiness & sinkage; no dragging; veg 100% NW (½" or less)
[illegible]																														8	100% slip due to sinkage; dragging on 10th pass, heavy dragging on 20th pass, veg 100% NW (½" or less)
[illegible]																														5	100% slip due to slipperiness & sinkage; no dragging; tilting to right, veg 100% NW (½" or less)

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	3-9	0-6	3-9	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE Cu	VANE TAN PHI	AUGER AU	AUGER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	B/W	SLIP PCNT
1 9212	[illegible]	[illegible]	[illegible]	[illegible]	37.0	38.4	999.9	999.9	999.9	999.9	78.7	78.1	999.0	81.7	78.9	999.0	999.0	999.0	999.0	2.0	0.36	2.0	0.40	[illegible]	[illegible]	[illegible]	[illegible]	19.0	[illegible]	[illegible]	[illegible]	99999	46
1 9612	51.0	37.4	[illegible]	[illegible]	[illegible]	33.2	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.0	93.8	82.8	999.0	999.0	999.0	999.0	3.0	0.08	2.1	0.19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99999	[illegible]	99999	99999	999
1 9612	999.9	999.9	[illegible]	[illegible]	[illegible]	999.9	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.0	999.9	999.9	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	1.5	1.2	[illegible]	[illegible]	[illegible]	99999	[illegible]	99999	99999	999

Table III-11

LOC. TEST SER. AREA	TEST TYPE	SOIL TYPE	VGH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 15-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
																														0	Vehicle completed 50 passes with ease; SFC damp; no veg.
																														1	
																														10	
																														51	
																														0	Vehicle completed 50 passes with ease; SFC damp; no veg; parallel to 109.
																														1	
																														10	
																														51	
																														0	Vehicle completed 50 passes with ease.
																														1	
																														10	
																														51	
																														0	Vehicle completed 50 passes but immob on 54th pass
																														1	
																														10	
																														54	
																														0	100% slip due to sinkage only; dragging on 8th; heavy dragging on 13th pass; SFC wet, no veg.
																														1	
																														0	100% slip due to sinkage; dragging on 6th pass; SFC wet and sticky; no veg.
																														1	
																														0	100% slip due to sinkage; dragging on 12th pass; SFC wet & sticky; no veg; parallel to test 114.
																														1	
																														0	100% slip due to sinkage; dragging on 13th pass; SFC wet; no veg.
																														1	
																														0	100% slip due to sinkage; dragging on 26th pass; heavy dragging on 30th pass; tilting to rt; SFC wet; no veg.
																														1	
																														0	Vehicle completed 50 passes with ease; some slip encountered; soil flowing from under tracks.
																														1	
																														51	
																														0	100% slip due to sinkage; dragging on 18th pass; heavy dragging on 22nd pass, SFC wet; no veg.
																														1	
																														0	100% slip due to slipperiness only; no drag; SFC wet; no veg.
																														1	
																														0	Did not drag; no veg; SFC damp.
																														1	
																														0	100% slip due to sinkage; dragging on 6th pass; SFC damp; veg 10% BM (½" or less)
																														1	

LOC. TEST SER. AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	6-9	6-9	9-12	6-12	12-15	15-18	18-18	DENSITY, LB/CU FT 0-3	3-6	6-9	6-9	9-12	6-12	12-15	15-18	18-18	SHEARGRAPH VANE CU	VANE PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/H	θ	A/B	SLIP POINT

Table III-12

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24
118319	1	2	50	0.375	0.50	14	40	88	86	95	70	108	[illegible]	308
118319	1	2	50	0.375	0.50	54	184	173	114	118	117	118	113	197
118319	1	2	50	0.375	0.50	58	92	139	93	99	109	113	133	198
118319	1	2	50	0.375	0.50	18	58	84	108	109	104	308	999	999
118419	2	2	49	0.375	0.50	30	82	118	97	105	95	108	131	133
118419	2	2	40	0.375	0.50	50	74	78	99	139	99	108	119	134
118419	2	2	40	0.375	0.50	42	77	88	90	111	104	118	108	112
118419	2	2	40	0.375	0.50	30	70	84	107	112	97	118	122	108
118519	1	2	40	0.375	0.50	48	77	88	98	108	104	119	108	118
118519	1	2	40	0.375	0.50	30	72	78	91	98	96	107	108	118
118619	1	2	40	0.375	0.50	27	72	87	109	101	73	73	119	203
118619	1	2	40	0.375	0.50	38	69	81	101	83	91	108	107	104
118619	1	2	40	0.375	0.50	999	999	999	999	999	999	999	999	999
118619	1	2	40	0.375	0.50	999	999	999	999	999	999	999	999	999
118619	1	2	40	0.375	0.50	18	68	68	87	89	77	79	88	180
118716	1	4	50	0.375	0.50	48	188	118	148	148	113	131	130	130
118716	1	4	50	0.375	0.50	44	94	108	148	103	104	104	118	138
118716	1	4	50	0.375	0.50	26	65	89	133	173	179	220	107	168

LOC. TEST AND AREA	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
118319	90	74	89	87	93	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	17	
118319	117	137	120	118	118	0.27	0.33	0.39	9.99	0.43	43	45	50	999	48	0	100% slip due to sinkage; dragging on 17th pass: SFC
118319	94	108	118	108	187	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	slightly damp; veg 30% SW (1" or less)
118319	58	88	109	172	238	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	19	
118419	77	93	101	96	103	0.43	0.39	0.49	9.99	0.42	33	36	49	999	43	99	Ground SFC frozen to 1"
118419	66	88	94	112	113	0.33	0.39	0.52	9.99	0.50	22	32	49	999	92	99	
118419	68	87	94	101	105	0.38	0.46	0.35	9.99	0.51	28	40	33	999	94	99	
118419	67	90	98	102	106	0.38	0.39	0.35	9.99	0.53	24	31	34	999	56	99	
118519	68	87	94	101	105	0.38	0.44	0.35	9.99	9.99	28	40	33	999	999	8	Vehicle started dragging on 20th pass but completed 50
118519	98	79	88	92	98	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	passes with difficulty; near test 126.
118619	88	89	99	94	82	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	61	*
118619	88	84	88	91	98	0.38	0.44	0.35	9.99	9.99	24	39	31	999	999	0	Dragging on 25th pass; heavy dragging on 35th pass;
118619	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	parallel to test 122.
118619	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	18	
118619	49	72	81	84	80	9.99	9.99	9.69	9.99	9.99	999	999	999	999	999	88	
118716	89	121	134	133	131	0.17	0.24	0.27	9.99	0.23	51	29	36	999	30	0	100% slip due to sinkage; dragging on 13th pass.
118716	88	117	140	150	150	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
118716	68	96	132	102	101	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	13	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118319	36.9	38.8	37.1	999.9	34.2	27.8	999.9	999.9	999.9	999.9
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118419	41.8	30.7	36.6	999.9	29.8	31.4	999.9	999.9	999.9	999.9
118419	42.3	30.1	30.4	999.9	29.3	28.9	999.9	999.9	999.9	999.9
118419	47.8	41.4	37.9	999.9	29.8	28.5	999.9	999.9	999.9	999.9
118419	43.3	34.8	33.3	999.9	29.2	31.4	999.9	999.9	999.9	999.9
118519	43.3	34.4	33.3	999.9	29.2	31.4	999.9	999.9	999.9	999.9
118519	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	43.3	34.1	33.3	999.9	29.2	31.4	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118716	35.7	40.1	34.2	999.9	34.8	29.6	999.9	999.9	999.9	999.9
118716	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118716	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

LOC. TEST AND AREA	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118319	84.8	77.8	999.9	85.7	98.0	999.9	999.9	999.9	999.9
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118319	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118419	77.6	82.2	999.9	88.1	88.4	999.9	999.9	999.9	999.9
118419	78.6	79.1	999.9	88.5	88.9	999.9	999.9	999.9	999.9
118419	74.6	88.5	999.9	88.3	91.0	999.9	999.9	999.9	999.9
118419	78.6	82.8	999.9	88.1	85.7	999.9	999.9	999.9	999.9
118519	78.6	82.8	999.9	88.1	85.7	999.9	999.9	999.9	999.9
118519	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	78.6	82.8	999.9	88.1	85.7	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118619	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118716	71.2	83.2	999.9	88.2	87.7	999.9	999.9	999.9	999.9
118716	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
118716	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

LOC. TEST AND AREA	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	Q	Q/R	SLIP PCNT
118319	99.9	9.99	99.9	9.99	14.0	15.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
118319	1.0	0.53	1.5	0.45	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
118319	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
118319	99.9	9.99	99.9	9.99	14.0	18.8	99.9	99.9	99.9	99999	9.99	99999	99999	999
118419	1.9	0.21	2.8	0.00	99.9	99.9	99.9	99.9	23.0	1700	9.99	99999	99999	30
118419	1.9	0.21	2.8	0.00	99.9	99.9	99.9	99.9	23.0	2000	9.99	99999	99999	28
118419	1.9	0.22	2.9	0.02	99.9	99.9	99.9	99.9	23.0	2100	9.99	99999	99999	24
118419	1.0	0.26	1.0	0.02	99.9	99.9	99.9	99.9	23.0	1750	9.99	99999	99999	30
118519	1.0	0.26	1.0	0.02	99.9	99.9	99.9	99.9	23.0	99999	9.99	99999	99999	999
118519	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	99999	9.99	99999	99999	999
118619	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	99999	9.99	99999	99999	999
118619	1.0	0.26	1.0	0.02	99.9	99.9	99.9	99.9	23.0	99999	9.99	99999	99999	999
118619	99.9	9.99	99.9	9.99	0.8	0.8	99.9	99.9	23.0	99999	9.99	99999	99999	999
118619	99.9	9.99	99.9	9.99	3.0	3.7	99.9	99.9	23.0	99999	9.99	99999	99999	999
118619	99.9	9.99	99.9	9.99	10.5	10.5	99.9	99.9	23.0	99999	9.99	99999	99999	999
118716	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999	999
118716	99.9	9.99	99.9	9.99	1.0	1.0	99.9	99.9	13.0	99999	9.99	99999	99999	999
118716	99.9	9.99	99.9	9.99	14.0	14.0	99.9	99.9	13.0	99999	9.99	99999	99999	999

Table III-13

Column headings of the upper part: LOC, TEST AND AREA | TEST TYPE | SOIL TYPE | VEH CODE NO. | PENETROMETER TYPE: STAFF SIZE, CONE SIZE | CI: 0, 3, 6, 9, 12, 15, 18, 21, 24 | CI AVG: 0-6, 3-9, 6-12, 9-15, 12-18 | RI: 0-6, 6-9, 6-12, 9-15, 12-18 | RCI: 0-6, 3-9, 6-12, 9-15, 12-18 | PASS NO. | REMARKS

PASS NO.	REMARKS
0	100% slip; 100% NW veg 2' or less; some water in tracks.
2	
0	100% slip; 90% NW veg 1' or less; no water in tracks.
3	
0	Immob due to sinkage; 85% NW veg (grass).
3	
0	Dragging on 8th pass; no SFC water; 100% veg-85% NW,
0	15% W 3' or less; water in ruts
0	100% slip due to sinkage; 100% veg-90% NW, 10% W 3' or
2	less; water in ruts.
0	Sinkage, 100% slip; 100% veg-85% NW 1' or less, 15% 3'
2	or less; water in ruts.
0	100% slip due to sinkage; 100% NW veg 2' or less; clay
9	layer at 18".
0	Parallel to test 7; no water in ruts.
4	
0	Parallel to test 7&8; 100% slip; sm amt water in ruts;
4	clay at 18"
0	100% slip; heavy veg mat.
1	
0	Sinkage; 100% slip; 100% veg cover 1' or less.
2	
0	Dragging on 8th pass; immob due to sinkage
10	
0	" " 10th " " " " "
11	
0	" " " " ; water forced to surface between
9	tracks.
0	Sinkage; 100% slip; NW veg 2" or less
1	
0	Dragging on 5th pass; 100% veg cover.
6	
0	Immob due to sinkage; 100% slip
2	
0	" " " " " "
2	
0	" " " " " "
6	
0	" " " " " " ; 90% NW veg.
1	
0	" " " " " " " " "
10	
0	Dragging on 4th pass; 100% veg cover, water in tracks
8	
0	" " " " " " " " " "
0	
6	
0	Dragging on 5th pass; tilting to lt; veh backed out
2	under own power.

Column headings of the lower part: LOC, TEST AND AREA | MOISTURE CONTENT, PERCENT DRY WT: 0-6, 6-9, 3-9, 0-9, 6-9, 9-12, 6-12, 12-15, 15-18, 12-18 | DENSITY, LB/CU FT: 0-3, 3-6, 0-6, 6-9, 9-12, 6-12, 12-15, 15-18, 12-18 | SHEARGRAPH: VANE CU, TAN PHI; RUBBER AU, TAN ALPHA | RUT DEPTH: LT, RT | RUT WIDTH: LT, RT | DEPTH WATER TABLE | D | B/H | B | B/R | SLIP PCNT

Table III-14

LOC. TEST AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	17-18	PASS NO.	REMARKS
[illegible]																												999	999	5	
[illegible]																												999	999	11	
[illegible]																												999	999	0	Vehicle tilting to rt; 100% slip; 100% NW veg 3' or less.
[illegible]																												999	999	4	
[illegible]																												999	999	0	100% slip; 100% veg cover 2' or less.
[illegible]																												999	999	3	
[illegible]																												999	999	0	100% slip; tilt to rt; water in ruts.
[illegible]																												999	999	4	
[illegible]																												999	999	0	" " " " " ; 100% NW veg 3' or less.
[illegible]																												999	999	19	
[illegible]																												999	999	0	" " ; no tilt; 100% NW veg 3' of less.
[illegible]																												999	999	1	
[illegible]																												999	999	4	
[illegible]																												999	999	0	100% slip; 90% NW veg 2' or less; clay pockets in test lane.
[illegible]																												999	999	15	
[illegible]																												999	999	0	SFC water; slight tilt to rt; 100% slip; 80-90% NW veg 2' or less.
[illegible]																												999	999	2	
[illegible]																												999	999	0	SFC water; tilt to rt; 100% slip
[illegible]																												999	999	2	
[illegible]																												999	999	0	1" SFC water.
[illegible]																												999	999	18	
[illegible]																												999	999	40	
[illegible]																												999	999	0	Completed 50 passes with difficulty; SFC water over test lane.
[illegible]																												999	999	18	
[illegible]																												999	999	21	
[illegible]																												999	999	0	Dragging on 4th pass; immob 10th pass in reverse; pulled out forward under own power.
[illegible]																												999	999	13	
[illegible]																												999	999	0	SFC water; 100% NW veg 2' or less
[illegible]																												999	999	16	
[illegible]																												999	999	0	Dragging on 7th pass; water in ruts; 100% slip; 90% NW veg 1' or less.
[illegible]																												999	999	0	
[illegible]																												999	999	0	Sinkage; 100% slip; heavy grass mat
[illegible]																												999	999	2	
[illegible]																												999	999	0	90% NW veg 2' or less; 10% W veg 2' or less; water in tracks.
[illegible]																												999	999	2	
[illegible]																												999	999	0	Dragging on 14th pass.
[illegible]																												999	999	2	
[illegible]																												999	999	16	
[illegible]																												999	999	0	Dragging on 16th pass; tilt to lt; water in ruts.
[illegible]																												999	999	2	
[illegible]																												999	999	18	
[illegible]																												999	999	0	80-90% NW veg 2' or less.
[illegible]																												999	999	0	" " " " " " "
[illegible]																												999	999	0	" " " " " " "
[illegible]																												999	999	0	" " " " " " "
[illegible]																												999	999	0	" " " " " " "
[illegible]																												999	[illegible]	0	" " " " " " "
[illegible]																												999	999	0	" " " " " " "

LOC. TEST AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	0-6	0-6	0-6	0-3	3-12	6-12	12-15	15-18	15-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	A	A/L	SLIP PCNT
[illegible]																																	

Table III-15

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	PENETROMETER TYPE: CONE SIZE	RI 0	RI 3	RI 6	RI 9	RI 12	RI 15	RI 18	RI 21	RI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	13	12	999	27	0	90-99% NW veg 2' or less.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	9	12	999	14	0	100% slip; heavy veg mat.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	2	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	10	8	999	9	8	Veh able to pull out forward due to roots and stumps
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	10	in test lane.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	999	12	999	999	0	100% NW veg 2' or less.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	999	16	999	999	8	" " " " " "
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	13	16	999	999	0	" " " " " "
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	16	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14	13	16	999	999	8	Veh having difficulty on 14th pass
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	16	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	8	11	999	999	8	100% slip; water in ruts.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	12	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	8	8	999	999	0	Veh having trouble on 11th pass; water in ruts; 100%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	13	slip.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	10	12	999	999	8	Dragging on 28th pass; pushing mud and water out each
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	51	end of test lane.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	7	12	999	999	8	Dragging on 40th pass.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	51	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	10	17	999	999	8	100% slip; 80% NW veg 2' or less
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	8	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	17	16	999	999	0	" " 90% " " " " "
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	10	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	10	12	999	999	8	" " " " " " " " ; sfc water
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	2	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11	11	18	999	999	0	" " 100% " " " " " ; sinkage
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	1	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	13	12	999	999	8	Dragging on 3rd pass; 90% NW veg 2' or less
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	4	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	12	14	999	999	8	Dragging on 4th pass; 90% NW veg 2' or less; 100%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	6	slip.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	11	11	999	999	8	Immob due to sinkage; 100% NW veg 2' or less; 100%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	3	slip.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	9	9	999	999	0	Immob due to sinkage; 80% NW veg 2' or less; 100% slip
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	1	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	13	13	999	[illegible]	0	" " " " " " " " " " " " "
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	6	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16	999	29	29	32	0	Dragging on 10th pass; completed 50 passes with diffi-
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	51	culty; approx 6" of soil sheared from ctr of test lane.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	10	33	18	21	8	Dragging on 4th pass; 80% NW veg, 10% W veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	10	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8	14	15	16	21	8	Dragging on 4th pass; test lane had roots in lt track;
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	14	ft and rear of veh sheared approx ½" top soil ea pass
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	21	15	999	18	0	100% slip; water in tracks; tilt to lt.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	4	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	12	18	13	7	0	100% slip; 100% NW veg.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	1	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	18	24	14	17	0	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	15-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	HUBBER AU	HUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/h	B	B/R	SLIP PCNT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Table III-16

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH. CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-3	3-6	6-12	9-15	15-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS

REMARKS (upper table):

Dragging on 4th pass; shearing centerof test lane; soil pushed out end of lane by tracks.
Dragging on 4th pass; pushing soil out of tracks; leaving vehicle on firm ground
This veh seems to immob on firmer soil as soon as it drags; soft soil flows from under tracks.
Dragging on 6th pass; no soil flow from under tracks.
Dragging on 6th pass.

Dragging on 5th pass; immob due to sinkage; 100% slip.
" " 11th " " " " " " "
" " 5th " " " " " " "
" " 12th " " " " " " "
Immob due to sinkage

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT										DENSITY, LB/CU FT									SHEARGRAPH VANE CU	TAN PHI	RUBBER AU	TAN ALPHA	RUT DEPTH LT	RT	RUT WIDTH LT	RT	DEPTH WATER TABLE	S	S/N	B	B/N	SLIP CONT

Table III-17

LOG. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Sinkage: 100% slip
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	" " " ; tilt to rt.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	" " " ; parallel to test 108.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	" " " ; dragging on 5th pass; parallel to test 105.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Dragging on 5th pass.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Test parallel to 117.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Dragging on 8th pass; test lane had roots in tracks.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Dragging on 4th pass.

LOG. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT										DENSITY, LB/CU FT										SHEARGRAPH VANE CU	SHEARGRAPH VANE TAN PHI	SHEARGRAPH RUBBER AU	SHEARGRAPH RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/H	R	A/R	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-18

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	2	1	37	0.375	0.50	17	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	144	41	44	85	116	133	[illegible]	0.22	0.25	9.99	9.99	13	14	21	999	999	0	
[illegible]	2	1	37	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	144	64	[illegible]	97	107	117	0.47	[illegible]	0.23	9.99	9.99	30	[illegible]	22	999	999	0	
[illegible]	2	1	37	0.375	0.50	41	111	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	96	[illegible]	147	149	[illegible]	[illegible]	[illegible]	0.28	9.99	9.99	35	38	41	999	999	0	
[illegible]	2	1	[illegible]	0.375	0.50	[illegible]	[illegible]	227	[illegible]	[illegible]	999	999	999	999	166	[illegible]	239	[illegible]	999	1.00	1.00	1.00	9.99	1.00	166	[illegible]	239	999	999	0	
[illegible]	2	1	[illegible]	0.375	0.50	[illegible]	94	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.35	0.37	9.99	9.99	34	38	45	999	999	0	
[illegible]	2	1	[illegible]	0.375	0.50	75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	274	[illegible]	122	[illegible]	[illegible]	[illegible]	0.43	0.40	0.33	9.99	9.99	44	49	49	999	999	0	
[illegible]	2	1	[illegible]	0.375	0.50	[illegible]	74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	9.99	[illegible]	[illegible]	39	999	999	0	
[illegible]	2	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	104	110	[illegible]	[illegible]	[illegible]	9.99	9.99	[illegible]	[illegible]	[illegible]	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	117	[illegible]	140	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	[illegible]	999	[illegible]	0	Dragging on 11th pass; completed 50 passes with difficulty; veh dragging side of ruts under tracks.
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	51	
214003	1	1	[illegible]	0.375	0.50	[illegible]	40	[illegible]	[illegible]	[illegible]	94	[illegible]	[illegible]	[illegible]	[illegible]	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.41	9.99	[illegible]	[illegible]	[illegible]	32	999	48	0	Veh dragging on 7th pass; backed out of test lane under own power.
214003	1	1	[illegible]	0.375	0.50	2	17	38	97	128	154	182	178	214	19	51	88	126	155	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	26	54	73	87	94	104	110	122	142	51	71	85	95	103	0.52	0.45	0.46	9.99	0.43	27	32	39	999	44	7	
214103	1	1	[illegible]	0.375	0.50	7	[illegible]	73	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	[illegible]	147	179	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	9	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	32	[illegible]	999	[illegible]	0	Dragging on 10th pass.
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	23	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	167	[illegible]	[illegible]	267	[illegible]	1.00	1.00	1.00	9.99	1.00	167	[illegible]	207	999	999	0	Veh did not slip out on this test.
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	227	[illegible]	1.00	1.00	1.00	9.99	1.00	[illegible]	[illegible]	222	999	235	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	144	[illegible]	225	999	235	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	163	[illegible]	207	999	274	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	153	177	999	[illegible]	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58	[illegible]	99	125	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	58	[illegible]	53	999	[illegible]	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	[illegible]	110	144	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	63	[illegible]	68	999	55	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58	[illegible]	99	125	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	58	[illegible]	53	999	35	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	[illegible]	110	144	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	63	[illegible]	68	999	55	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	167	[illegible]	[illegible]	267	[illegible]	1.00	1.00	1.00	9.99	1.00	167	[illegible]	207	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	227	[illegible]	1.00	1.00	1.00	9.99	[illegible]	151	[illegible]	222	999	[illegible]	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	166	[illegible]	239	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	166	[illegible]	239	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	[illegible]	[illegible]	[illegible]	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	[illegible]	[illegible]	[illegible]	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	107	[illegible]	275	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.00	1.00	1.00	9.99	1.00	176	[illegible]	275	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70	94	107	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	34	999	38	0	Dragging on 5th pass.
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	92	[illegible]	155	166	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77	[illegible]	[illegible]	103	[illegible]	[illegible]	[illegible]	9.99	[illegible]	16	[illegible]	[illegible]	999	21	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	64	85	103	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	3	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	93	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	[illegible]	[illegible]	999	20	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	149	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	2	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	101	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	40	[illegible]	999	[illegible]	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	109	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	5	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	15	17	23	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	149	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	2	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	71	77	[illegible]	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	147	233	286	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	51	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	102	114	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	[illegible]	44	44	999	999	0	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	230	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	22	
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	125	[illegible]	171	[illegible]	205	[illegible]	[illegible]	[illegible]	9.99	[illegible]	125	72	999	999	999	0	Dragging on 40th pass; completed 50 passes without difficulty.
[illegible]	1	1	[illegible]	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.99	[illegible]	999	999	999	999	999	51	

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	3-9	6-12	9-15	12-18	15-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	0-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/H	B	D/B	SLIP CONT	Ī 0-1
213104	23.3	22.0	999.0	999.0	999.0	999.0	[illegible]	[illegible]	999.0	96.4	101.0	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	4.0	193	0.24	99999	99999	999	999.0
213204	23.9	24.2	999.0	999.0	999.0	999.0	91.7	89.3	999.0	98.1	[illegible]	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	22.0	1010	0.45	99999	99999	999	999.0
[illegible]	24.9	24.9	999.0	999.0	999.0	999.0	[illegible]	94.1	999.1	91.6	94.6	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	22.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	22.4	21.3	999.0	21.5	21.2	999.0	76.2	72.8	999.0	97.7	96.2	999.0	96.0	102.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	24.0	4550	0.63	99999	99999	999	999.0
[illegible]	24.0	23.5	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	22.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	24.3	22.3	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	22.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	14.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	14.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.9	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	17.3	13.8	999.0	17.1	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	24.2	24.2	99.0	99.0	99.9	99999	9.99	99999	99999	999	999.0
[illegible]	13.9	14.0	999.0	13.3	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	4.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	999.0	[illegible]	999.0	999.0	999.0	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	17.1	17.1	99.0	99.0	99.9	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	999.0	[illegible]	999.0	999.0	999.0	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	17.0	17.0	99.0	99.0	99.9	99999	9.99	99999	99999	999	999.0
[illegible]	22.7	22.1	999.0	22.5	22.0	999.0	90.9	93.1	999.0	97.1	98.7	999.0	97.5	98.1	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	19.0	99999	9.99	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	26.0	26.0	99.0	99.0	99.9	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	25.4	25.0	999.0	23.0	21.0	999.0	[illegible]	87.9	999.0	[illegible]	[illegible]	999.0	91.0	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	23480	[illegible]	99999	99999	999	999.0
214403	24.3	23.0	999.0	23.5	23.1	999.0	[illegible]	86.7	999.0	[illegible]	[illegible]	999.0	91.3	92.7	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	33511	[illegible]	99999	99999	999	999.0
[illegible]	24.3	23.0	999.0	23.5	23.1	999.0	[illegible]	86.7	999.0	[illegible]	[illegible]	999.0	91.3	92.1	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
214603	22.2	24.0	999.0	23.0	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	22.3	21.7	999.0	22.9	21.0	999.0	77.4	97.3	999.0	93.2	94.0	999.0	96.2	97.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	22.4	21.3	999.0	21.5	21.2	999.0	76.2	92.8	999.0	97.7	96.2	999.0	96.0	102.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	20.1	22.5	999.0	19.8	18.9	999.0	81.1	91.4	999.0	97.7	97.8	999.0	97.7	98.5	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	19.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	22.4	21.3	999.0	21.8	21.2	999.0	76.2	92.8	999.0	97.7	96.2	999.0	96.0	102.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	19.0	7080	[illegible]	99999	99999	999	999.0
[illegible]	20.1	22.5	999.0	19.8	18.9	999.0	81.1	91.4	999.0	97.7	97.8	999.0	97.7	98.5	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	19.0	[illegible]	[illegible]	99999	99999	999	999.0
215203	25.4	25.0	999.0	23.0	21.0	999.0	[illegible]	87.9	999.0	[illegible]	[illegible]	999.0	92.0	94.4	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	24.3	23.0	999.0	23.5	23.1	999.0	[illegible]	86.7	999.0	[illegible]	[illegible]	999.0	91.3	92.7	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	22.4	21.3	999.0	21.5	21.2	999.0	76.2	92.8	999.0	97.7	96.2	999.0	96.0	102.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	0.74	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	0.74	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	5841	0.72	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	25.0	[illegible]	[illegible]	99999	99999	999	999.0
[illegible]	31.1	29.7	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	79.2	76.2	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	13.0	99999	9.99	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	15.8	15.8	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	21.8	21.0	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	12.3	12.3	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	12.9	12.9	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	31.1	29.7	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	79.2	76.2	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	13.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	[illegible]	[illegible]	999.0	99.0	9.99	99.0	9.99	13.7	13.7	99.0	99.0	13.0	99999	9.99	99999	99999	999	999.0
[illegible]	23.7	27.5	999.0	21.3	21.0	999.0	[illegible]	92.3	999.0	[illegible]	101.2	999.0	103.1	104.4	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	9.4	9.4	99.0	99.0	10.0	99999	9.99	99999	99999	999	999.0
[illegible]	26.4	24.4	999.0	999.0	999.0	999.0	74.2	92.0	999.0	[illegible]	96.7	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	17.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	7.6	7.6	99.0	99.0	17.0	99999	9.99	99999	99999	999	999.0
[illegible]	22.8	12.8	999.0	999.0	999.0	999.0	94.8	78.7	999.0	90.7	106.7	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	17.0	99999	9.99	99999	99999	999	999.0
[illegible]	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	8.3	8.3	99.0	99.0	19.0	99999	9.99	99999	99999	999	999.0
[illegible]	20.4	20.4	999.0	999.0	999.0	999.0	86.3	[illegible]	999.0	[illegible]	100.5	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	19.0	99999	9.99	99999	99999	999	999.0
216403	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	99.0	9.99	99.0	9.99	11.5	11.5	99.0	99.0	99.9	99999	9.99	99999	99999	999	999.0

Table III-19

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
210703	1	3	45	0.375	0.50	31	112	117	188	182	191	191	178	184	87	119	128	134	161	0.92	0.99	0.48	0.99	0.99	54	999	49	999	999	2	100% slip [illegible] sinkage, dragging on 23rd pass; 60% [illegible]
210703	1	3	45	0.375	0.50	16	76	140	200	280	212	211	999	999	80	153	205	225	214	0.99	0.99	0.99	0.99	0.99	999	999	999	999	999	28	2' or less.
210803	1	3	45	0.375	0.50	30	82	143	197	236	299	999	999	999	65	141	193	238	999	0.88	0.99	0.67	0.99	0.99	75	999	129	999	999	2	Completed 50 passes without difficulty, no dragging. 60%
210803	1	3	45	0.375	0.50	135	276	300	999	999	999	999	999	999	234	999	999	999	999	0.99	0.99	0.99	0.99	0.99	999	999	999	999	999	51*	[illegible] 2' or less.
210903	1	3	45	0.375	0.50	38	75	91	112	113	180	141	167	195	68	93	106	117	127	0.73	0.99	0.40	0.99	0.36	47	999	52	999	71	8	100% slip due to sinkage, dragging on [illegible] pass. 60% [illegible]
210903	1	3	45	0.375	0.50	13	44	90	189	176	190	194	196	191	39	77	121	165	187	0.99	0.99	0.99	0.99	0.99	999	999	999	999	999	36	2' or less.
217003	1	3	45	0.375	0.50	100	122	143	176	282	232	273	381	999	129	147	174	253	236	1.00	0.62	0.58	0.99	0.99	125	62	101	999	999	3	Completed 50 passes without difficulty, [illegible] dragging
217003	1	3	45	0.375	0.50	197	296	999	999	999	999	999	999	999	999	999	999	999	999	0.99	0.99	0.99	0.99	0.99	999	999	999	999	999	51	[illegible] 2' or less

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEAROGRAPH VANE CU	VANE TAN PHI	RUBBER CA	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	Q	Q/R	SLIP PCNT
2107 3	999.9	999.9	28.0	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	89.4	999.9	97.8	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	19.0	99999	9.99	99999	99999	999
2107 3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.7	11.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
2108 3	999.9	25.1	28.9	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	86.6	97.6	999.9	999.9	100.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	69.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
2108 3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	3.1	3.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
2109 3	999.9	22.2	28.1	999.9	[illegible]	17.5	999.9	999.9	999.9	999.9	87.4	96.0	999.9	100.8	102.5	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
2109 3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	16.7	16.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
2170 3	999.9	21.0	28.4	999.9	[illegible]	17.1	999.9	999.9	999.9	999.9	96.0	93.0	999.9	103.7	102.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
2170 3	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.9	6.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-20

LOC.	TEST AND AREA	TEST TYPE	SOIL TYPE	VGH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0 / 3 / 6 / 9 / 12 / 15 / 18 / 21 / 24; CI AVG; RI 0-12 / 9-15 / 12-18; RCI 0-6 / 3-9 / 6-12 / 9-15 / 12-18	PASS NO.	REMARKS
3	101	1	1	2	0.025	0.50	[illegible]	[illegible]	100% slip due to sinkage.
3	101	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	201	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	201	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	301	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	301	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	401	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	401	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	501	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	501	1	1	2	0.025	0.50	[illegible]	[illegible]	" " " "
3	601	1	1	66	0.025	0.50	[illegible]	[illegible]	" " " "
3	601	1	1	66	0.025	0.50	[illegible]	[illegible]	" " " "
3	701	1	1	66	0.025	0.50	[illegible]	[illegible]	" " " " " ; dragging on 2nd pass.
3	701	1	1	66	0.025	0.50	[illegible]	[illegible]	" " " " " ; " " " "
3	801	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	801	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	901	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	901	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1001	1	1	74	0.025	0.50	[illegible]	[illegible]	" " " " " " 4th "
3	1001	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1101	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1101	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1201	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1201	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1301	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1301	1	1	74	0.025	0.50	[illegible]	[illegible]	
3	1401	1	1	66	0.025	0.50	[illegible]	[illegible]	Dragging on 4th pass.
3	1401	1	1	66	0.025	0.50	[illegible]	[illegible]	
3	1501	1	1	9	0.025	0.50	[illegible]	14	" " 5th "
3	[illegible]	1	1	9	0.025	0.50	[illegible]	[illegible]	
3	[illegible]	1	1	9	0.025	0.50	[illegible]	[illegible]	Probably immob due to slipperiness; barely dragging; seemed underpowered.
3	[illegible]	1	1	9	0.025	0.50	[illegible]	[illegible]	Dragging on 3rd pass; had power failure; could not spin wheels.
3	[illegible]	1	1	9	0.025	0.50	[illegible]	[illegible]	Vehicle had little trouble traveling forward but could not back out.
3	[illegible]	1	1	9	0.025	0.50	[illegible]	[illegible]	Did not drag, had power failure-could not spin wheels sand layer at 4".
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	Immob due to sinkage, could not spin wheels.
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	" " " " " " " "
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	100% slip due to sinkage.
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	
3	[illegible]	1	1	11	0.025	0.50	[illegible]	[illegible]	
3	[illegible]	1	1	[illegible]	0.025	0.50	[illegible]	[illegible]	" " " " "
3	[illegible]	1	1	[illegible]	0.025	0.50	[illegible]	[illegible]	" " " " "
3	2401	1	1	[illegible]	0.025	0.50	[illegible]	7	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1 / 0-3 / 3-6 / 6-9 / 6-9 / 9-12 / 6-12 / 12-15 / 15-18 / 18-18	DENSITY, LB/CU FT 0-3 / 3-6 / 0-6 / 6-9 / 9-12 / 6-12 / 12-15 / 15-18 / 12-18	SHEARGRAPH VANE CU	TAN PHI	RUBBER AU	TAN ALPHA	RUT DEPTH LT	RT	RUT WIDTH LT	RT	DEPTH WATER TABLE	B	B/W	B	B/R	SLIP PRNT
3 101	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3 101 … 3 2401	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-21

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	RI 0	RI 3	RI 6	RI 9	RI 12	RI 15	RI 18	RI 21	RI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

REMARKS:

- 100% slip due to sinkage, hard clay layer at 12".
- " " " " " " " 15".
- Dragging on 4th pass.
- Immob due to sinkage, had power failure.
- Dragging on 3rd pass.
- Could not spin tracks when immob.
- Dragging on 2nd pass had power failure.
- Had trouble spinning wheels.
- 100% slip due to sinkage.
- Vehicle slightly dragging.
- Dragging on 5th pass.
- Dragging on 2nd pass.
- 100% slip due to sinkage.
- Free water in ruts could be a problem with SFC slipperiness.
- No free water before traffic but about ¼" after the first pass in ruts.
- No SFC water, crust not hard.
- 100% slip due to sinkage, dragging on 3rd pass, no SFC water, very little crust.
- 100% slip due to sinkage, dragging on 2nd pass, no SFC water, no crust, no veg.
- Immob due to sinkage, heavy dragging.
- " " " ; vehicle had power trouble.

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	3-9	0-3	3-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/N	B	B/N	SLIP PCNT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-22

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PAS NO	REMARKS
3 4002	1	1	41	0.025	0.50	18	12	12	26	37	45	47	48	56	14	17	25	36	43	0.79	0.79	0.44	9.99	0.98	11	13	16	999	42	3	Only slightly dragging when immob.
3 4902	1	1	41	0.025	0.50	6	18	28	33	38	45	51	57	61	17	26	33	39	45	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
3 5002	2	1	74	0.025	0.50	48	38	38	48	60	68	74	82	89	41	41	48	59	67	0.79	0.75	0.74	9.99	1.03	31	31	36	999	67	3	
3 5102	2	1	74	0.025	0.50	34	27	29	38	45	54	57	63	64	29	28	34	44	52	0.70	0.68	0.65	9.99	0.68	20	19	22	999	35	2	
3 5202	2	1	74	0.025	0.50	27	18	15	26	40	50	50	58	56	19	19	27	39	47	0.64	0.65	0.65	9.99	0.48	12	12	18	999	23	2	
3 5302	2	1	74	0.025	0.50	21	15	14	22	33	43	47	48	51	17	17	33	33	41	0.68	0.68	0.42	9.99	0.53	10	9	9	999	22	0	
3 5502	2	1	74	0.025	0.50	101	85	129	119	101	89	88	78	86	105	111	114	103	93	0.88	0.86	0.83	9.99	0.86	92	95	96	999	80	0	Power failure-15% W 3" or less ; 30% NW 1.5" or less
3 5602	2	1	74	0.025	0.50	68	62	65	118	180	102	99	134	107	65	82	94	107	93	0.88	0.83	0.77	9.99	0.94	57	68	72	999	93	0	
3 5702	2	1	74	0.025	0.50	96	53	46	68	81	76	100	114	124	92	56	68	82	96	0.89	0.81	0.81	9.99	0.82	46	40	53	999	77	0	100% slip-5% W 1.5" or less, 15% NW .5" or less
3 5802	2	1	74	0.025	0.50	44	30	33	33	49	68	62	69	73	39	31	37	47	57	0.64	0.69	0.74	9.99	0.80	28	21	27	999	34	0	
3 5902	2	1	74	0.025	0.50	43	25	21	24	40	58	61	60	64	30	26	28	41	53	0.64	0.62	0.59	9.99	0.60	19	14	17	999	40	0	
3 6002	2	1	74	0.025	0.50	35	17	15	18	37	47	51	83	94	22	17	23	34	48	0.62	0.62	0.62	9.99	0.60	14	11	14	999	36	0	
3 6102	1	1	41	0.025	0.50	8	9	13	15	26	28	33	39	45	10	12	13	23	33	0.67	0.65	0.71	9.99	0.69	7	8	13	999	20	0	
3 6102	1	1	41	0.025	0.50	9	12	12	14	25	26	31	37	48	11	12	17	23	27	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	No dragging, free water in ruts after 1st pass, power
3 6202	1	1	41	0.025	0.50	28	11	11	23	32	39	41	44	47	14	15	22	31	37	0.79	0.80	0.56	9.99	0.62	11	9	10	999	30	1	failure occured 5% W 1.5" or less-15% NW .5" or less
3 6202	1	1	41	0.025	0.50	6	15	25	31	35	36	41	48	53	15	24	36	34	37	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	100% slip - no dragging
3 6302	2	1	41	0.025	0.50	37	33	30	35	47	59	68	63	74	33	33	37	47	66	0.78	0.87	0.83	9.99	0.88	26	29	31	999	29	3	
3 6402	2	1	41	0.025	0.50	31	22	26	21	34	46	48	40	52	26	33	27	34	46	0.78	0.84	0.83	9.99	0.88	20	29	31	999	29	3	Power failure-2% W 1.5" or less 15% NW .5" or less.
3 6502	2	1	41	0.025	0.50	20	8	8	16	33	43	40	49	49	12	11	10	31	41	0.65	0.68	0.39	9.99	0.88	17	19	20	999	29	0	
3 6602	2	1	41	0.025	0.50	35	11	9	12	27	35	30	39	42	15	11	16	25	34	0.79	0.79	0.55	9.99	0.70	10	6	11	999	36	0	" " 30% NW .5" or less
3 6902	2	1	74	0.025	0.50	131	123	116	148	184	92	87	78	74	123	120	129	121	101	1.33	1.15	1.00	9.99	0.88	11	999	999	999	24	0	
3 7002	2	1	74	0.025	0.50	78	87	82	148	106	80	78	78	69	82	102	109	100	88	1.08	1.08	0.93	9.99	0.88	164	140	126	999	36	0	100% slip SPC cracked 10% W 3" or less 50% NW 2" or less
3 7102	2	1	74	0.025	0.50	99	47	43	64	78	83	87	97	116	90	91	68	75	83	1.00	0.95	0.83	9.99	0.76	71	77	60	999	62	0	
3 7302	2	1	64	0.025	0.50	95	91	91	89	75	65	67	74	76	92	88	71	75	69	0.80	0.71	0.72	9.99	1.00	41	48	56	999	88	0	" " " " " " 10% NW .5" or less
3 7402	2	1	64	0.025	0.50	33	31	28	48	84	59	68	67	80	31	33	41	51	58	0.78	0.72	0.61	9.99	0.80	38	43	50	999	46	0	" " " 5% W 3" or less 60% NW 1" or less
3 7502	2	1	64	0.025	0.50	15	12	18	21	36	48	44	46	47	13	15	23	32	40	0.73	0.75	0.62	9.99	0.71	22	24	29	999	28	0	" " " 15% W 1.5" or less 5% NW .5" or less
3 7602	2	1	64	0.025	0.50	13	9	18	19	33	39	39	41	44	11	11	19	28	34	0.81	0.65	0.61	9.99	0.76	7	7	12	999	27	0	" " " 25% NW .5" or less
3 7802	2	1	64	0.025	0.50	76	203	164	119	116	109	108	84	68	140	162	133	119	111	1.08	1.08	1.00	9.99	1.00	140	168	133	999	111	0	
3 7902	2	1	64	0.025	0.50	79	210	213	188	113	181	183	88	97	107	181	149	111	106	1.08	1.08	1.00	9.99	1.00	107	181	148	999	106	0	SPC cracked very crumbly & loose, no veg 100% slip
3 8002	2	1	64	0.025	0.50	98	56	68	104	83	63	69	78	75	61	76	89	83	72	0.69	0.89	0.74	9.99	0.72	48	48	68	999	98	0	
3 8102	2	1	64	0.025	0.50	64	67	115	181	115	99	88	79	69	82	104	120	115	100	0.92	0.68	0.83	9.99	1.08	43	64	100	999	100	0	" " 100% slip; 3% W 3" or less 60% NW .5" or less
3 8202	1	1	41	0.025	0.50	18	7	7	14	32	32	36	36	48	8	8	13	38	26	0.67	0.64	0.82	9.99	0.79	5	6	15	999	26	0	" " " ; 1% W 3" of less 50% NW 1.5" or less
3 8202	1	1	41	0.025	0.50	3	11	16	18	18	22	29	39	41	18	14	17	19	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	100% slip; 50% NW .5" or less.
3 8302	2	1	64	0.025	0.50	22	25	26	55	91	53	59	71	76	24	35	44	53	66	0.69	0.89	0.70	9.99	0.81	18	21	34	999	44	0	
3 8402	1	1	41	0.025	0.50	15	11	11	28	35	44	48	47	53	12	15	23	28	34	0.68	0.71	0.68	9.99	0.70	7	11	16	999	29	0	" " ; SPC cracked, 4% W 1.5" or less 5% NW .5" or less.
3 8432	1	1	41	0.025	0.50	5	18	24	27	38	38	40	88	57	16	25	27	38	46	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	60% NW .5" or less.
3 8502	2	1	64	0.025	0.50	8	6	7	12	38	38	38	38	56	7	8	16	38	39	0.83	9.99	9.99	9.99	9.99	999	999	999	999	999	7	
3 8602	2	1	64	0.025	0.50	49	166	228	183	187	181	84	79	66	146	179	191	110	97	1.00	0.98	0.98	9.99	1.07	146	999	999	999	28	0	" " ; SPC cracked not crumbly, 25% NW .5" or less
3 8702	1	1	48	0.025	0.50	9	6	6	18	26	27	29	31	33	7	16	14	18	27	0.74	0.68	0.58	9.99	0.88	5	5	8	999	23	0	
3 8702	1	1	48	0.025	0.50	3	15	16	17	28	24	32	38	42	11	16	32	31	40	0.74	0.58	0.56	9.99	0.88	3	4	6	999	24	0	" " 50% NW .5" or less
3 8802	1	1	48	0.025	0.50	13	12	18	18	36	40	51	58	53	12	14	22	34	46	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
3 8802	1	1	48	0.025	0.50	5	14	24	31	36	42	48	58	63	14	22	30	36	46	0.99	9.99	0.74	9.99	0.78	999	12	18	999	32	1	
3 8902	1	1	48	0.025	0.50	16	14	19	26	38	49	58	58	58	15	18	28	38	44	0.99	0.88	0.74	9.99	0.88	999	999	999	999	999	3	
3 8902	1	1	48	0.025	0.50	5	15	30	39	34	43	58	57	61	19	27	34	38	43	0.77	0.70	0.76	9.99	0.88	12	14	19	999	20	0	" " 60% NW .5" or less.
3 9002	1	1	47	0.025	0.50	31	21	19	40	51	55	68	78	82	24	27	33	40	56	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	13	
3 9002	1	1	47	0.025	0.50	20	29	37	40	59	63	71	63	89	29	38	46	49	64	0.72	0.64	0.73	9.99	0.79	17	18	27	999	44	0	vehicle dragging, 5% W 1" or less 30% NW .5" less
3 9102	2	1	47	0.025	0.50	34	29	41	61	91	45	58	58	64	35	44	51	52	49	0.69	0.65	0.69	9.99	0.88	24	24	38	999	33	8	
3 9102	1	1	47	0.025	0.50	28	40	39	51	99	73	84	88	99	33	43	58	61	72	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	13	100% slip due to sinkage, dragging on 10th pass, 5% W 2" or less, 50% NW .5" or less

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	B/R	SLIP PCNT
3 4002	999.9	999.9	999.9	83.9	999.9	999.9	66.9	999.9	999.9	84.2	999.9	999.9	83.0	999.9	999.9	60.9	999.9	999.9	84.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 4902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.2	8.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 5002	999.9	999.9	999.9	68.1	999.9	999.9	63.1	999.9	999.9	78.3	999.9	999.9	58.0	999.9	999.9	62.8	999.9	999.9	54.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	7076	0.82	99999	99999	100
3 5102	93.9	999.9	999.9	68.9	999.9	999.9	76.7	999.9	999.9	68.7	999.9	999.9	60.0	999.9	999.9	54.7	999.9	999.9	59.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	5405	0.40	99999	99999	100
3 5202	96.0	999.9	999.9	73.9	999.9	999.9	77.5	999.9	999.9	66.5	999.9	999.9	55.7	999.9	999.9	53.6	999.9	999.9	60.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	2490	0.18	99999	99999	100
3 5302	68.9	999.9	999.9	78.8	999.9	999.9	85.2	999.9	999.9	73.7	999.9	999.9	55.5	999.9	999.9	49.0	999.9	999.9	55.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	910	0.07	99999	99999	100
3 5502	48.7	999.9	999.9	56.6	999.9	999.9	43.9	999.9	999.9	58.6	999.9	999.9	63.1	999.9	999.9	72.3	999.9	999.9	65.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	10659	0.78	99999	99999	100
3 5602	47.8	999.9	999.9	59.2	999.9	999.9	45.5	999.9	999.9	53.1	999.9	999.9	64.0	999.9	999.9	74.2	999.9	999.9	59.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	11382	0.83	99999	99999	100
3 5702	46.8	999.9	999.9	57.7	999.9	999.9	56.1	999.9	999.9	76.7	999.9	999.9	64.1	999.9	999.9	66.2	999.9	999.9	54.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	9778	0.72	99999	99999	100
3 5802	58.8	999.9	999.9	68.7	999.9	999.9	62.9	999.9	999.9	73.4	999.9	999.9	60.3	999.9	999.9	62.2	999.9	999.9	58.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	7198	0.53	99999	99999	100
3 5902	54.6	999.9	999.9	66.2	999.9	999.9	65.4	999.9	999.9	101.1	999.9	999.9	58.0	999.9	999.9	60.9	999.9	999.9	44.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	4093	0.30	99999	99999	100
3 6002	53.6	999.9	999.9	69.8	999.9	999.9	66.5	999.9	999.9	73.7	999.9	999.9	56.1	999.9	999.9	59.7	999.9	999.9	55.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	2972	0.19	99999	99999	100
3 6102	999.9	999.9	999.9	88.3	999.9	999.9	87.2	999.9	999.9	74.1	999.9	999.9	51.5	999.9	999.9	49.8	999.9	999.9	56.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
3 6102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.8	10.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 6202	999.9	999.9	999.9	78.1	999.9	999.9	61.9	999.9	999.9	83.6	999.9	999.9	54.2	999.9	999.9	63.0	999.9	999.9	51.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	4.0	99999	9.99	99999	99999	999
3 6202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.0	8.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 6302	98.6	999.9	999.9	66.2	999.9	999.9	61.7	999.9	999.9	87.0	999.9	999.9	60.1	999.9	999.9	62.2	999.9	999.9	58.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1000	0.28	99999	99999	999
3 6402	98.8	999.9	999.9	68.9	999.9	999.9	66.9	999.9	999.9	82.2	999.9	999.9	61.3	999.9	999.9	59.6	999.9	999.9	52.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1080	0.30	99999	99999	999
3 6502	98.6	999.9	999.9	78.4	999.9	999.9	67.1	999.9	999.9	75.2	999.9	999.9	54.4	999.9	999.9	60.6	999.9	999.9	55.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	792	0.21	99999	99999	999
3 6602	97.3	999.9	999.9	77.7	999.9	999.9	65.9	999.9	999.9	75.6	999.9	999.9	53.5	999.9	999.9	60.3	999.9	999.9	59.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	768	0.22	99999	99999	999
3 6902	33.8	999.9	999.9	37.1	999.9	999.9	37.7	999.9	999.9	44.4	999.9	999.9	62.3	999.9	999.9	81.3	999.9	999.9	67.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	11392	0.84	99999	99999	100
3 7002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	11887	0.86	99999	99999	100
3 7102	92.9	999.9	999.9	66.1	999.9	999.9	52.9	999.9	999.9	97.7	999.9	999.9	59.5	999.9	999.9	68.3	999.9	999.9	51.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	9849	0.72	99999	99999	100
3 7302	92.7	999.9	999.9	64.7	999.9	999.9	49.9	999.9	999.9	61.5	999.9	999.9	60.8	999.9	999.9	69.9	999.9	999.9	63.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	3762	0.76	99999	99999	100
3 7402	98.9	999.9	999.9	64.9	999.9	999.9	62.3	999.9	999.9	80.7	999.9	999.9	60.0	999.9	999.9	63.8	999.9	999.9	52.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	3392	0.62	99999	99999	100
3 7502	68.8	999.9	999.9	79.9	999.9	999.9	117.0	999.9	999.9	74.6	999.9	999.9	58.2	999.9	999.9	50.9	999.9	999.9	56.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	2659	0.94	99999	99999	100
3 7602	70.8	999.9	999.9	88.2	999.9	999.9	70.3	999.9	999.9	88.0	999.9	999.9	52.8	999.9	999.9	58.4	999.9	999.9	51.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	2288	0.48	99999	99999	100
3 7802	18.9	999.9	999.9	24.2	999.9	999.9	41.3	999.9	999.9	41.7	999.9	999.9	73.0	999.9	999.9	74.0	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	4109	0.83	99999	99999	100
3 7902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	4231	0.89	99999	99999	100
3 8002	51.1	999.9	999.9	58.6	999.9	999.9	44.8	999.9	999.9	54.6	999.9	999.9	67.0	999.9	999.9	73.2	999.9	999.9	64.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	3873	0.78	99999	99999	100
3 8102	38.6	999.9	999.9	28.3	999.9	999.9	38.1	999.9	999.9	49.1	999.9	999.9	999.9	999.9	999.9	73.6	999.9	999.9	71.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	3617	0.73	99999	99999	100
3 8202	69.3	999.9	999.9	88.9	999.9	999.9	69.3	999.9	999.9	73.3	999.9	999.9	52.0	999.9	999.9	55.8	999.9	999.9	56.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	99999	9.99	99999	99999	999
3 8202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.9	8.2	99.9	99.9	99.5	99999	9.99	99999	99999	999
3 8302	55.0	999.9	999.9	68.7	999.9	999.9	53.8	999.9	999.9	65.9	999.9	999.9	58.5	999.9	999.9	68.2	999.9	999.9	56.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	3379	0.68	99999	99999	100
3 8402	66.1	999.9	999.9	78.2	999.9	999.9	66.9	999.9	999.9	63.5	999.9	999.9	55.2	999.9	999.9	60.1	999.9	999.9	62.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	99999	9.99	99999	99999	999
3 8402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.4	6.6	99.9	99.9	99.5	99999	9.99	99999	99999	999
3 8502	68.8	999.9	999.9	84.8	999.9	999.9	65.3	999.9	999.9	80.8	999.9	999.9	50.0	999.9	999.9	60.0	999.9	999.9	53.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2925	0.59	99999	99999	100
3 8602	33.3	999.9	999.9	33.8	999.9	999.9	35.0	999.9	999.9	42.7	999.9	999.9	73.3	999.9	999.9	999.9	999.9	999.9	73.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3663	0.74	99999	99999	100
3 8702	69.8	999.9	999.9	77.8	999.9	999.9	44.8	999.9	999.9	86.5	999.9	999.9	52.7	999.9	999.9	61.8	999.9	999.9	58.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 8702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.5	9.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 8802	66.1	999.9	999.9	88.9	999.9	999.9	62.3	999.9	999.9	80.2	999.9	999.9	51.4	999.9	999.9	62.6	999.9	999.9	53.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 8802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.4	6.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 8902	97.6	999.9	999.9	78.8	999.9	999.9	68.7	999.9	999.9	89.4	999.9	999.9	53.3	999.9	999.9	58.2	999.9	999.9	49.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 8902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.6	9.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9002	98.3	999.9	999.9	78.6	999.9	999.9	53.2	999.9	999.9	69.2	999.9	999.9	56.5	999.9	999.9	70.3	999.9	999.9	58.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.8	11.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9102	34.6	999.9	999.9	66.8	999.9	999.9	54.7	999.9	999.9	68.3	999.9	999.9	58.4	999.9	999.9	60.2	999.9	999.9	65.1	99.9	9.99	99.9	9.99	99.9	99.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.6	12.7	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-23

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
3 9202	1	1	47	0.025	0.50	27	19	24	33	99	64	78	91	99	23	32	49	90	67	0.71	0.88	1.69	9.99	3.72	16	19	31	999	48	0	% slip due to sinkage, dragging on 2d pass, 3% W 2' or less, % NW .5' or less
3 9202	1	1	47	0.025	0.50	24	30	34	35	40	70	88	88	99	32	34	50	94	77	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
3 9302	1	1	47	0.025	0.50	20	21	28	42	60	61	71	86	91	26	37	50	81	64	0.73	0.71	1.07	9.99	0.84	19	20	34	999	54	0	% slip due to sinkage, 9th pass, 5% W 2' or less, % NW .5' or less.
4 9302	1	1	47	0.025	0.50	23	37	44	64	77	99	101	113	115	35	46	62	79	91	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	11	
3 9402	1	1	40	0.025	0.50	10	6	7	21	31	36	38	48	43	8	11	20	29	35	0.81	0.72	0.60	9.99	0.07	7	8	14	999	23	0	% slip % NW .5' or less
3 9402	1	1	40	0.025	0.50	3	14	26	24	37	31	38	47	51	12	19	24	27	32	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
3 9502	1	1	40	0.025	0.50	3	7	7	31	31	30	38	40	44	6	11	19	30	36	0.78	0.68	0.53	9.99	0.63	6	[illegible]	18	999	23	0	
3 9502	1	1	40	0.025	0.50	7	10	21	35	36	40	48	51	57	14	22	29	32	38	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
3 9602	2	1	40	0.025	0.50	47	30	48	60	56	55	51	48	59	34	48	74	71	50	0.71	0.60	0.75	9.99	0.70	30	41	50	999	44	0	Power failure; 3% W 3' or less, 30% NW .5' or less.
3 9702	2	1	40	0.025	0.50	41	116	180	181	110	88	83	46	44	115	148	141	108	91	0.80	0.61	1.20	9.99	1.29	58	88	108	999	117	0	1% W 3' or less, 20% NW 1' or less.
3 9802	2	1	40	0.025	0.50	79	91	88	115	88	78	70	46	46	85	95	[illegible]	[illegible]	76	0.94	0.80	0.80	9.99	0.84	80	70	82	999	64	0	% W 3' or less, 30% NW 1' or less.
3 9902	2	1	40	0.025	0.50	42	125	170	113	118	78	67	61	61	112	136	128	97	82	0.50	0.61	1.20	9.99	1.20	96	83	104	999	106	0	3% NW 1' or less.
310002	2	1	41	0.025	0.50	15	11	13	41	99	58	61	70	78	13	22	34	92	98	0.69	0.66	0.65	9.99	0.78	9	15	28	999	45	0	5% NW .5' or less.
310102	2	1	41	0.025	0.50	91	185	175	112	94	79	68	62	68	116	181	127	94	79	0.96	0.71	1.02	9.99	0.70	62	93	130	999	99	0	did not reach 100% slip
310202	2	1	41	0.025	0.50	68	48	30	70	98	58	47	48	55	51	55	58	82	92	0.55	0.67	0.69	9.99	0.80	27	37	48	969	[illegible]	0	
310302	2	1	41	0.025	0.50	29	13	17	48	44	42	48	62	65	17	26	36	45	45	0.79	0.88	0.53	9.99	0.98	16	13	13	999	41	0	
310402	2	1	41	0.025	0.50	37	30	34	61	61	48	58	94	99	36	50	46	63	84	0.82	0.80	0.79	9.99	0.80	41	31	40	999	48	0	
310502	2	1	41	0.025	0.50	88	143	109	180	180	91	78	78	71	135	167	168	180	99	1.00	0.79	1.00	9.99	1.00	138	129	108	999	99	0	
310602	1	1	31	0.025	0.50	17	10	11	29	37	44	47	81	93	13	18	24	35	43	0.63	0.71	0.79	9.99	0.80	8	11	18	999	29	0	100% slip due to slipperiness only, no dragging 20% W 1.5' or less, 30% NW .5' or less.
310602	1	1	31	0.025	0.50	8	21	28	38	31	44	91	89	88	17	23	24	33	42	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
310702	1	1	31	0.025	0.50	29	14	17	30	92	58	94	88	87	22	23	34	48	84	0.63	0.72	0.65	9.99	0.89	13	17	28	999	48	0	100% slip due to slipperiness only, no dragging, 5% W 1' or less, 50% NW .5' or less.
310702	1	1	31	0.025	0.50	13	29	28	38	48	40	58	81	90	21	28	31	38	47	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	14	
310802	2	1	31	0.025	0.50	79	92	114	136	91	79	68	88	61	95	115	114	182	78	1.51	0.88	0.89	9.99	0.70	143	50	181	999	78	0	100% slip, 3% W 3' or less, 30% NW 1' or less.
310902	2	1	31	0.025	0.50	37	22	26	44	[illegible]	67	73	74	74	29	37	98	87	78	0.76	0.78	1.04	9.99	0.68	19	29	34	999	48	0	" " 3% " " " " 70% " " "
311002	2	1	31	0.025	0.50	98	140	202	109	131	108	180	88	188	130	180	170	149	116	9.99	9.99	0.78	9.99	9.99	999	999	137	999	999	0	" " 20% NW .5' or less.
311102	2	1	31	0.025	0.50	90	132	199	191	141	102	87	88	81	130	173	170	145	112	9.99	9.99	2.10	9.99	9.99	999	999	370	999	999	0	" " 5% W 3' or less, 50% NW 1' or less.
311202	2	1	31	0.025	0.50	80	92	132	120	101	77	79	78	74	97	120	112	103	86	0.77	1.03	0.89	9.99	0.99	67	112	100	999	99	0	" " " " " " " "
311302	2	1	31	0.025	0.50	40	32	33	45	64	62	88	88	88	[illegible]	[illegible]	[illegible]	[illegible]	71	0.70	0.74	0.81	9.99	0.73	31	38	36	999	98	0	" " 20% NW .5' or less.
311402	2	1	31	0.025	0.50	36	28	28	38	98	98	98	98	71	28	39	47	[illegible]	95	0.81	0.77	0.88	9.99	0.70	14	38	38	999	39	0	" " no veg
311502	2	1	31	0.025	0.50	83	91	83	89	78	72	77	71	76	99	79	79	82	76	0.72	0.77	0.60	9.99	0.80	48	94	94	999	69	0	" " " "
311602	1	1	31	0.025	0.50	13	8	8	38	33	40	48	44	46	10	13	21	38	38	0.76	0.88	0.38	9.99	0.47	8	7	9	999	18	0	100% slip due to slipperiness, no dragging 60% NW .5' or less
311602	1	1	31	0.025	0.50	8	14	21	34	88	36	44	48	93	15	20	24	29	36	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
311702	1	1	31	0.025	0.50	18	11	19	31	47	53	57	60	47	19	10	31	43	98	0.39	0.40	0.60	9.99	0.77	8	8	21	999	98	0	100% slip due to slipperiness, no dragging 60% NW .5' or less
311702	1	1	31	0.025	0.50	11	22	31	37	44	53	64	78	76	21	31	37	48	88	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
311802	1	1	31	0.025	0.50	26	16	18	40	48	56	90	63	76	21	29	33	47	93	0.63	0.48	0.74	9.99	0.77	13	18	26	999	41	0	100% dlip due to sinkage, dragging next to wheels, 50% NW .5' or less.
311802	1	1	31	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
311902	1	1	31	0.025	0.50	34	38	38	48	90	92	90	44	67	31	42	91	97	99	0.06	0.60	0.59	9.99	0.70	27	29	38	999	48	0	100% slip due to sinkage, dragging next to wheels on 8th pass, 3% W 3' or less, 60% NW .5' or less.
311902	1	1	31	0.025	0.50	24	44	41	46	98	68	71	77	81	39	43	40	97	64	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
312002	1	1	31	0.025	0.50	21	21	24	27	39	99	87	99	74	26	30	47	97	90	0.72	0.62	0.60	9.99	0.63	84	28	38	999	37	0	100% slip due to sinkage, dragging next to wheels, 3% W 3' or less, 30% NW .5' or less.
312002	1	1	31	0.025	0.50	24	43	48	48	47	49	78	88	88	33	48	59	57	88	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
312102	1	1	31	0.025	0.50	43	34	30	48	94	98	91	88	81	38	40	91	94	49	0.89	0.64	0.83	9.99	0.81	80	29	42	999	40	0	100% slip due to sinkage dragging next to wheels, 3% W 3' or less 30% NW .5' or less.
312102	1	1	31	0.025	0.50	32	56	48	47	93	99	75	88	121	35	53	49	63	62	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	18	
312202	1	1	31	0.025	0.50	26	12	28	40	88	97	84	76	79	21	27	41	52	87	0.76	0.68	0.60	9.99	0.78	18	17	36	999	44	0	Same as test 121.
312202	1	1	31	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
312302	1	1	33	0.025	0.50	11	9	8	38	30	41	48	88	99	7	14	26	37	41	0.88	1.02	0.68	9.99	0.81	8	7	17	999	31	0	100% slip due to slipperiness only, no dragging 50% NW .5' or less.
312302	1	1	33	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
312403	1	1	33	0.025	0.50	25	11	18	46	99	91	98	71	74	18	25	38	49	84	0.88	0.48	0.50	9.99	0.98	11	11	22	999	58	0	100% slip due to sinkage, dragging on 35th pass; 3% W 2' or less, 70% NW 1' or less.
312403	1	1	33	0.025	0.50	8	10	20	80	37	58	56	63	64	19	23	20	38	40	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	48	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	[illegible]	[illegible]	SLIP PCNT
3 9202	37.0	999.0	999.9	44.8	999.9	999.9	58.0	999.9	999.9	70.7	999.9	999.9	58.0	999.9	999.9	64.7	999.9	999.9	68.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9202	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.4	11.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9302	88.4	999.0	999.9	44.9	999.9	999.9	56.0	999.9	999.9	50.4	999.9	999.9	59.8	999.9	999.9	67.5	999.9	999.9	64.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9302	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.0	999.9	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.3	10.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9402	40.3	999.0	999.9	80.8	999.9	999.9	72.0	999.9	999.9	80.1	999.9	999.9	40.8	999.9	999.9	57.3	999.9	999.9	58.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9402	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.2	6.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9502	71.0	999.0	999.9	88.1	999.9	999.9	72.0	999.9	999.9	41.9	999.9	999.9	38.6	999.9	999.9	56.5	999.9	999.9	57.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9502	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.3	8.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
3 9602	39.0	999.0	999.9	47.8	999.9	999.9	45.5	999.9	999.9	97.2	999.9	999.9	69.2	999.9	999.9	999.9	999.9	999.9	66.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1120	0.32	99999	99999	999
3 9702	21.0	999.0	999.9	27.9	999.9	999.9	37.0	999.9	999.9	48.3	999.9	999.9	75.0	999.9	999.9	72.1	999.9	999.9	71.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1069	0.30	99999	99999	999
3 9802	42.4	999.0	999.9	41.8	999.9	999.9	42.5	999.9	999.9	56.4	999.9	999.9	75.7	999.9	999.9	72.2	999.9	999.9	64.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1160	0.33	99999	99999	999
3 9902	999.9	999.0	999.9	41.8	999.9	999.9	37.0	999.9	999.9	48.3	999.9	999.9	75.0	999.9	999.9	72.1	999.9	999.9	71.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.34	99999	99999	999
310002	71.0	999.0	999.9	48.1	999.9	999.9	67.0	999.9	999.9	74.6	999.9	999.9	58.0	999.9	999.9	52.3	999.9	999.9	55.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	720	0.28	99999	99999	999
310102	19.0	999.0	999.9	30.8	999.9	999.9	34.0	999.9	999.9	47.0	999.9	999.9	62.5	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1048	0.29	99999	99999	999
310202	46.0	999.0	999.9	71.8	999.9	999.9	40.0	999.9	999.9	64.5	999.9	999.9	56.8	999.9	999.9	70.7	999.9	999.9	61.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1140	0.33	99999	99999	999
310302	34.7	999.0	999.9	71.8	999.9	999.9	57.0	999.9	999.9	62.1	999.9	999.9	56.2	999.9	999.9	66.1	999.9	999.9	63.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	970	0.27	99999	99999	999
310402	38.0	999.0	999.9	98.0	999.9	999.9	50.1	999.9	999.9	67.5	999.9	999.9	63.8	999.9	999.9	67.4	999.9	999.9	59.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	960	0.27	99999	99999	999
310502	21.0	999.0	999.9	18.1	999.9	999.9	37.0	999.9	999.9	47.0	999.9	999.9	67.9	999.9	999.9	66.3	999.9	999.9	70.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1280	0.34	99999	99999	999
310602	67.0	999.0	999.9	84.6	999.9	999.9	62.9	999.9	999.9	83.2	999.9	999.9	58.6	999.9	999.9	63.9	999.9	999.9	52.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.9	11.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
310702	64.8	999.0	999.9	70.0	999.9	999.9	70.2	999.9	999.9	82.0	999.9	999.9	53.0	999.9	999.9	57.9	999.9	999.9	52.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310702	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.0	13.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
310802	27.8	999.0	999.9	38.0	999.9	999.9	48.8	999.9	999.9	56.1	999.9	999.9	61.6	999.9	999.9	68.2	999.9	999.9	66.2	99.9	9.59	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4112	0.57	99999	99999	999
310902	38.9	999.0	999.9	76.8	999.9	999.9	50.1	999.9	999.9	60.8	999.9	999.9	55.8	999.9	999.9	69.8	999.9	999.9	58.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2240	0.31	99999	99999	999
311002	18.6	999.0	999.9	18.8	999.9	999.9	32.2	999.9	999.9	47.1	999.9	999.9	73.2	999.9	999.9	64.6	999.9	999.9	65.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4144	0.57	99999	99999	999
311102	26.4	999.0	999.9	31.8	999.9	999.9	32.2	999.9	999.9	43.8	999.9	999.9	77.0	999.9	999.9	69.5	999.9	999.9	75.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3884	0.53	99999	99999	999
311202	26.8	999.0	999.9	46.8	999.9	999.9	44.9	999.9	999.9	59.8	999.9	999.9	71.2	999.9	999.9	73.7	999.9	999.9	64.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3994	0.53	99999	99999	999
311302	48.6	999.0	999.9	64.8	999.9	999.9	55.0	999.9	999.9	72.5	999.9	999.9	63.5	999.9	999.9	65.1	999.9	999.9	56.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3398	0.47	99999	99999	999
311402	38.3	999.0	999.9	78.1	999.9	999.9	72.0	999.9	999.9	77.9	999.9	999.9	54.4	999.9	999.9	56.0	999.9	999.9	54.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1880	0.26	99999	99999	999
311502	43.8	999.0	999.9	88.8	999.9	999.9	52.0	999.9	999.9	66.2	999.9	999.9	59.9	999.9	999.9	69.2	999.9	999.9	66.6	99.9	9.59	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3760	0.52	99999	99999	999
311602	61.7	999.0	999.9	87.1	999.9	999.9	68.2	999.9	999.9	79.1	999.9	999.9	48.9	999.9	999.9	60.0	999.9	999.9	53.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
311602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.2	10.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
311702	68.0	999.0	999.9	88.0	999.9	999.9	66.1	999.9	999.9	999.9	999.9	999.9	58.8	999.9	999.9	60.1	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
311702	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.0	9.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
311802	36.7	999.0	999.9	77.0	999.9	999.9	62.5	999.9	999.9	999.9	999.9	999.9	52.8	999.9	999.9	63.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
311802	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.5	9.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
311902	98.7	999.0	999.9	63.1	999.9	999.9	55.9	999.9	999.9	999.9	999.9	999.9	41.0	999.9	999.9	66.6	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
311902	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.1	9.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
312002	37.1	999.0	999.9	78.1	999.9	999.9	48.7	999.9	999.9	65.0	999.9	999.9	55.0	999.9	999.9	72.2	999.9	999.9	59.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312002	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.4	6.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
312102	40.8	999.0	999.9	30.4	999.9	999.9	52.1	999.9	999.9	64.0	999.9	999.9	65.0	999.9	999.9	69.0	999.9	999.9	59.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312102	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.1	10.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
312202	68.8	999.0	999.9	70.7	999.9	999.9	61.1	999.9	999.9	59.6	999.9	999.9	53.9	999.9	999.9	64.2	999.9	999.9	65.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312202	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.8	9.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
312302	67.6	999.0	999.9	99.8	999.9	999.9	65.1	999.9	999.9	63.1	999.9	999.9	40.4	999.9	999.9	999.9	999.9	999.9	63.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312302	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.6	8.8	99.9	99.9	99.9	99999	9.99	99999	99999	999
312403	95.3	999.0	999.9	70.3	999.9	999.9	55.5	999.9	999.9	67.9	999.9	999.9	53.4	999.9	999.9	68.0	999.9	999.9	59.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312403	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.8	13.7	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-24

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
312903	1	1	53	0.025	0.50	17	13	12	19	22	42	41	41	44	14	13	16	36	35	0.74	0.68	0.08	9.99	0.97	18	8	11	999	20	0	100% slip due to slipperiness, no dragging 50% NW 1' or
312903	1	1	53	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	less.
312603	1	1	53	0.025	0.50	27	17	14	17	29	41	47	50	53	19	16	20	39	39	0.49	0.49	0.04	9.99	0.79	9	8	13	999	31	0	100% slip due to slipperiness, no dragging 50% NW 1' or
312603	1	1	53	0.025	0.50	8	17	19	22	27	35	42	48	50	15	19	23	28	35	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	less.
312702	1	1	53	0.025	0.50	33	22	19	18	32	49	58	69	61	23	18	22	33	45	0.60	0.68	0.47	9.99	0.70	15	11	18	999	35	0	
312702	1	1	53	0.025	0.50	9	16	20	29	31	37	49	50	57	15	20	25	31	38	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
312802	1	1	53	0.025	0.50	49	35	24	27	44	60	72	81	86	36	29	32	44	59	0.05	0.02	0.61	9.99	0.53	23	24	20	999	31	0	100% slip due to sinkage, dragging on 25th pass 20% NW
312802	1	1	53	0.025	0.50	46	29	32	38	41	48	54	63	71	29	32	30	42	48	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	32	.5' or less.
312902	1	1	53	0.025	0.50	40	26	18	19	38	52	57	61	62	27	20	24	36	49	0.45	0.79	0.59	9.99	0.84	12	19	13	999	41	0	100% slip due to sinkage, dragging on 8th pass 20% NW
312902	1	1	53	0.025	0.50	13	23	30	30	41	46	50	59	56	22	29	35	40	44	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	.5' or less.
313002	2	1	53	0.025	0.50	35	20	19	21	38	32	37	51	64	20	23	24	36	46	0.69	0.85	0.72	9.99	0.70	19	20	17	999	43	0	100% slip 55 # 2' or less 60% NW 1' or less.
313102	2	1	53	0.025	0.50	32	35	29	28	38	41	48	73	75	34	29	29	41	54	0.74	0.75	0.75	9.99	0.81	30	22	22	999	44	0	
313202	2	1	53	0.025	0.50	14	12	13	18	25	40	44	48	50	13	14	18	27	37	0.72	0.67	0.55	9.99	0.80	7	7	11	999	25	0	" " 70% NW .5' or less.
313202	2	1	53	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
313302	2	1	53	0.025	0.50	72	90	80	110	104	104	97	97	93	90	99	110	110	100	0.70	0.75	0.05	9.99	0.90	71	72	94	999	93	0	Veh powered down on pull 60% NW .5' or less.
313402	2	1	53	0.025	0.50	71	71	60	109	102	92	86	90	85	70	88	98	106	94	0.05	0.08	0.72	9.99	0.03	60	72	71	999	99	0	Same as test 133.
313502	2	1	53	0.025	0.50	83	89	84	180	180	122	108	95	79	85	108	121	133	126	0.77	0.06	0.79	9.99	0.02	65	86	96	999	105	0	Veh slipped some pwr failure evident 60% NW .5' or less (dead)
313602	2	1	53	0.025	0.50	92	96	80	184	180	89	80	77	67	89	100	103	106	94	0.61	0.08	0.78	9.99	0.00	78	82	88	999	80	0	" " " " " " " 75% NW " "
313702	2	1	53	0.025	0.50	92	196	229	290	284	170	197	190	103	190	229	234	280	186	9.99	9.99	0.70	9.99	9.99	999	999	166	999	999	0	" " " " " " " 100% " "
313802	2	1	53	0.025	0.50	100	140	167	217	287	172	161	185	121	130	175	197	199	180	9.99	9.99	0.70	9.99	9.99	999	999	130	999	999	0	" " " " " " " " "
313902	1	1	29	0.025	0.50	30	10	10	81	43	96	60	72	79	21	18	27	48	55	0.08	0.64	0.69	9.99	0.00	14	12	19	999	48	0	100% slip due to sinkage veh dragging 60% NW .5' or less
313902	1	1	29	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
314002	1	1	29	0.025	0.50	40	27	24	26	39	52	53	57	61	33	26	31	39	48	0.00	0.08	0.39	9.99	0.08	19	17	12	999	31	0	" " " " " " no veg
314002	1	1	29	0.025	0.50	27	19	38	30	41	45	40	58	54	26	31	37	42	48	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
314102	1	1	29	0.025	0.50	92	29	29	28	40	55	50	63	68	36	28	38	41	51	0.03	0.75	0.48	9.99	0.08	33	21	15	999	34	0	" " " " " " " "
314102	1	1	29	0.025	0.50	27	22	39	41	45	40	53	57	63	28	33	40	48	49	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
314202	1	1	29	0.025	0.50	62	44	34	40	80	72	77	86	89	47	41	41	54	66	0.00	0.70	0.96	9.99	0.87	38	38	30	999	38	0	" " " " " dragging on 4th pass 5% NW .5' less
314202	1	1	29	0.025	0.50	86	29	39	47	83	90	64	71	68	31	38	46	53	58	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
314302	1	1	29	0.025	0.50	34	29	28	27	36	54	50	44	68	35	36	20	39	40	0.02	0.79	0.89	9.99	0.03	22	21	25	999	31	0	" " " " " veh drag, 10% NW .5' or less
314302	1	1	29	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
314402	1	1	29	0.025	0.50	37	34	29	26	36	57	61	67	71	32	30	29	40	51	0.71	0.06	0.86	9.99	0.00	22	18	25	999	26	0	" " " " " " " 60% NW .5' or less.
314402	1	1	29	0.025	0.50	25	25	37	41	45	48	51	58	56	29	34	41	45	48	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
314502	1	1	64	0.025	0.50	5	5	6	9	14	29	31	39	36	9	7	10	17	29	0.82	0.47	0.56	9.99	0.37	3	3	6	999	16	0	" " " " " " " no veg.
314502	1	1	64	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
314602	1	1	64	0.025	0.50	11	8	9	13	23	31	34	38	41	9	10	15	22	29	0.82	0.05	0.00	9.99	0.27	5	6	18	999	17	0	" " " " " dragging on 6th pass 10% NW .5' less
314602	1	1	64	0.025	0.50	4	12	15	23	25	27	31	30	42	10	17	21	25	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
314702	1	1	66	0.025	0.50	7	6	7	10	15	32	38	35	37	7	8	11	19	26	0.86	0.86	0.54	9.99	0.47	4	5	6	999	12	0	" " " " " veh dragging no veg.
314702	1	1	66	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
314802	1	1	66	0.025	0.50	13	9	9	13	27	34	37	40	43	10	10	16	29	33	0.06	0.73	0.50	9.99	0.48	5	7	9	999	16	0	" " " " " drag on 4th pass 20% NW .5' or less
314802	1	1	66	0.025	0.50	7	11	17	22	33	28	38	30	42	12	17	21	24	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
314902	1	1	66	0.025	0.50	13	8	9	13	33	25	37	40	42	10	10	15	26	32	0.73	0.70	0.40	9.99	0.71	7	8	7	999	23	0	" " " " " " " " " "
314902	1	1	66	0.025	0.50	6	15	20	26	29	33	39	43	49	14	21	20	29	32	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
315002	1	1	66	0.025	0.50	8	6	6	10	23	30	33	36	39	7	8	14	21	29	0.00	0.04	0.00	9.99	0.25	4	4	18	999	16	0	" " " " " veh dragging no veg.
315002	1	1	66	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
315102	1	1	62	0.025	0.50	9	9	6	8	10	20	20	31	34	5	6	8	15	22	0.60	0.71	0.33	9.99	0.09	3	4	3	999	15	0	" " " " " " " " "
315102	1	1	62	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
315202	1	1	62	0.025	0.50	14	11	9	12	21	34	37	39	42	11	11	14	22	31	0.00	0.50	0.57	9.99	0.07	7	8	8	999	21	0	" " " " " " " " "
315202	1	1	62	0.025	0.50	9	14	17	22	26	31	36	48	45	13	10	22	26	31	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE Cu	TAN PHI	RUBBER AU	TAN ALPHA	RUT DEPTH LT	RT	RUT WIDTH LT	RT	DEPTH WATER TABLE	B	B/W	B	B/B	SLIP PCNT
312903	98.4	999.9	999.9	60.2	999.9	999.9	75.1	999.9	999.9	79.3	999.9	999.9	57.7	999.9	999.9	56.1	999.9	999.9	56.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312913	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.0	13.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
312603	40.8	999.9	999.9	48.4	999.9	999.9	72.5	999.9	999.9	72.7	999.9	999.9	59.8	999.9	999.9	56.7	999.9	999.9	57.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312603	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.7	14.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
312702	37.1	999.9	999.9	68.0	999.9	999.9	76.7	999.9	999.9	78.2	999.9	999.9	61.7	999.9	999.9	54.6	999.9	999.9	58.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.0	15.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
312802	41.7	999.9	999.9	64.0	999.9	999.9	95.2	999.9	999.9	67.2	999.9	999.9	68.3	999.9	999.9	66.2	999.9	999.9	60.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.0	13.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
312902	48.6	999.9	999.9	88.1	999.9	999.9	88.3	999.9	999.9	69.3	999.9	999.9	63.6	999.9	999.9	49.5	999.9	999.9	59.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
312902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.3	11.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
313002	46.0	999.9	999.9	38.9	999.9	999.9	83.6	999.9	999.9	69.6	999.9	999.9	67.2	999.9	999.9	51.6	999.9	999.9	60.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2000	1.41	99999	99999	100
313102	98.6	999.9	999.9	38.7	999.9	999.9	76.7	999.9	999.9	64.1	999.9	999.9	65.0	999.9	999.9	54.4	999.9	999.9	61.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3040	1.08	99999	99999	100
313202	64.0	999.9	999.9	38.0	999.9	999.9	91.3	999.9	999.9	63.3	999.9	999.9	53.0	999.9	999.9	47.2	999.9	999.9	62.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
313202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.6	14.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
313302	48.0	999.9	999.9	48.0	999.9	999.9	36.0	999.9	999.9	40.6	999.9	999.9	75.4	999.9	999.9	78.5	999.9	999.9	69.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4404	1.00	99999	99999	100
313402	30.7	999.9	999.9	40.0	999.9	999.9	44.0	999.9	999.9	56.0	999.9	999.9	69.2	999.9	999.9	68.7	999.9	999.9	62.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4006	1.04	99999	99999	100
313502	88.2	999.9	999.9	38.2	999.9	999.9	41.1	999.9	999.9	46.4	999.9	999.9	65.4	999.9	999.9	73.6	999.9	999.9	69.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4008	1.44	99999	99999	100
313602	37.0	999.9	999.9	40.0	999.9	999.9	40.5	999.9	999.9	51.2	999.9	999.9	73.1	999.9	999.9	67.1	999.9	999.9	64.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4406	1.62	99999	99999	100
313702	18.3	999.9	999.9	30.0	999.9	999.9	30.1	999.9	999.9	38.6	999.9	999.9	72.5	999.9	999.9	72.7	999.9	999.9	60.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4800	1.64	99999	99999	100
313802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	5180	1.71	99999	99999	100
313902	64.9	999.9	999.9	40.0	999.9	999.9	71.5	999.9	999.9	71.5	999.9	999.9	61.5	999.9	999.9	57.2	999.9	999.9	58.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
313902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.4	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
314002	48.8	999.9	999.9	38.7	999.9	999.9	84.0	999.9	999.9	64.6	999.9	999.9	62.7	999.9	999.9	51.0	999.9	999.9	61.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.9	8.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
314102	46.0	999.9	999.9	37.1	999.9	999.9	54.9	999.9	999.9	79.7	999.9	999.9	64.3	999.9	999.9	67.9	999.9	999.9	53.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.0	9.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
314202	38.0	999.9	999.9	38.3	999.9	999.9	73.1	999.9	999.9	62.0	999.9	999.9	58.7	999.9	999.9	56.9	999.9	999.9	62.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.6	10.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
314302	66.6	999.9	999.9	96.8	999.9	999.9	74.5	999.9	999.9	63.4	999.9	999.9	64.6	999.9	999.9	54.4	999.9	999.9	62.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.7	9.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
314402	98.1	999.9	999.9	96.0	999.9	999.9	64.9	999.9	999.9	83.1	999.9	999.9	64.2	999.9	999.9	61.5	999.9	999.9	52.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.7	9.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
314502	79.0	999.9	999.9	97.2	999.9	999.9	107.2	999.9	999.9	78.9	999.9	999.9	45.6	999.9	999.9	42.3	999.9	999.9	53.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.8	6.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
314602	68.0	999.9	999.9	78.9	999.9	999.9	95.6	999.9	999.9	81.3	999.9	999.9	53.9	999.9	999.9	46.9	999.9	999.9	93.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.6	9.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
314702	81.6	999.9	999.9	98.2	999.9	999.9	111.0	999.9	999.9	74.9	999.9	999.9	47.9	999.9	999.9	40.5	999.9	999.9	56.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.3	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
314802	68.7	999.9	999.9	88.8	999.9	999.9	89.3	999.9	999.9	77.2	999.9	999.9	51.6	999.9	999.9	49.6	999.9	999.9	54.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.9	10.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
314902	67.8	999.9	999.9	77.8	999.9	999.9	69.1	999.9	999.9	74.7	999.9	999.9	52.5	999.9	999.9	59.2	999.9	999.9	56.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
314902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.3	10.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
315002	88.9	999.9	999.9	80.8	999.9	999.9	81.2	999.9	999.9	74.7	999.9	999.9	47.0	999.9	999.9	53.2	999.9	999.9	55.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
315002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
315102	88.1	999.9	999.9	94.6	999.9	999.9	98.7	999.9	999.9	73.7	999.9	999.9	40.4	999.9	999.9	44.1	999.9	999.9	55.8	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
315102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
315202	81.4	999.9	999.9	78.7	999.9	999.9	95.5	999.9	999.9	73.9	999.9	999.9	54.0	999.9	999.9	46.7	999.9	999.9	55.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
315202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-25

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
315302	2	1	64	0.029	0.50	8	6	8	10	13	26	33	33	36	7	8	19	16	24	0.09	0.48	0.45	9.99	0.59	5	4	45	999	13	0	No veg.
315402	2	1	64	0.029	0.50	10	8	9	12	15	31	30	37	40	9	10	12	19	27	0.74	0.46	0.04	9.99	0.89	7	9	6	999	15	0	15% NW .5' or less.
315502	2	1	64	0.029	0.50	15	11	10	14	17	35	39	41	44	12	12	14	22	30	0.99	0.67	0.44	9.99	0.91	7	8	6	999	27	0	" " " " "
315602	2	1	64	0.029	0.50	33	22	17	18	25	46	49	53	55	24	19	20	31	40	0.72	0.71	0.74	9.99	0.63	17	13	18	999	29	0	" " " "
315702	2	1	64	0.029	0.50	8	6	8	10	13	31	34	30	38	7	6	10	18	26	0.69	0.92	0.39	9.99	0.91	5	4	6	999	13	0	Veh became immob on DP run at lake edge 100% slip No veg
315802	2	1	64	0.029	0.50	10	8	9	12	15	31	30	30	40	9	10	12	19	20	0.92	0.61	0.48	9.99	0.54	9	8	9	999	15	0	15% NW .5' or less
315902	2	1	64	0.029	0.50	15	10	11	14	19	37	41	44	44	12	12	15	23	32	0.71	0.69	0.52	9.99	0.07	8	8	8	999	21	0	15% NW .5' or less
316002	2	1	64	0.029	0.50	40	25	17	20	27	50	53	58	60	27	21	21	32	43	0.72	0.67	0.67	9.99	0.86	10	14	14	999	37	0	SFC cracked 70% NW .5' or less
316102	2	1	64	0.029	0.50	42	34	23	33	36	50	60	64	69	33	27	27	30	51	0.66	0.70	0.57	9.99	0.99	22	19	15	999	20	0	15% NW .5' or less
316202	1	1	62	0.029	0.50	4	4	6	7	10	26	26	27	29	5	6	8	14	21	0.87	0.80	0.42	9.99	0.50	4	5	3	999	12	0	100% slip due to sinkage, no veg.
316202	1	1	62	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	995	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
316302	1	1	62	0.029	0.50	10	9	8	11	20	31	34	36	30	9	9	16	23	31	0.72	0.68	0.62	9.99	0.41	6	8	10	999	13	0	" " " " " dragging on 2d pass no veg.
316302	1	1	62	0.029	0.50	10	16	17	21	26	29	39	40	41	14	10	21	29	31	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
316402	1	1	62	0.029	0.50	14	9	10	18	33	30	38	34	37	11	18	20	27	32	0.77	0.68	0.70	9.99	0.74	8	7	16	999	26	0	Immob due to power failure, dragging on 4th pass, could
316402	1	1	62	0.029	0.50	7	13	15	20	33	30	30	41	44	12	16	19	24	38	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	8	possibly made 1-2 more passes no veg
316502	1	1	63	0.029	0.50	3	3	4	6	13	25	27	31	32	3	4	8	15	22	0.98	0.86	0.50	9.99	0.08	2	2	4	999	10	0	100% slip no veg.
316502	1	1	60	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
316602	1	1	60	0.029	0.50	6	6	7	11	19	29	33	39	48	6	8	16	23	30	0.79	0.80	0.56	9.99	0.47	5	9	9	999	14	0	100% " " "
316602	1	1	60	0.029	0.50	9	13	15	19	22	20	37	41	42	12	16	19	23	29	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
316702	1	1	60	0.029	0.50	6	9	6	10	24	26	29	32	35	6	7	13	20	26	0.76	0.63	0.80	9.99	0.41	5	4	10	999	11	8	" " due to sinkage, dragg on 2d pass no veg.
316702	1	1	60	0.029	0.50	9	11	15	20	25	33	43	44	46	12	15	20	26	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
316802	1	1	60	0.029	0.50	7	10	14	17	22	30	38	30	44	10	14	18	23	29	0.71	0.64	0.67	9.99	0.00	7	9	12	999	20	0	" " " " " " " 5th " " "
316802	1	1	60	0.029	0.50	8	5	6	13	20	29	34	32	36	6	8	16	24	30	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	8	
316902	2	1	64	0.029	0.50	127	97	96	133	235	137	111	103	92	107	109	158	160	161	0.72	1.16	0.94	9.99	1.38	77	126	146	999	222	8	SFC cracked, dry & crumbly 90% NW .5' or less (dead grass)
317002	2	1	64	0.029	0.50	13	96	90	146	113	92	94	80	76	69	113	119	117	100	0.99	0.01	0.79	9.99	0.63	68	92	89	999	85	0	" " " "
317102	1	1	51	0.029	0.50	13	9	10	13	18	32	37	42	45	11	11	14	21	29	0.60	0.77	0.58	9.99	0.43	7	8	7	999	12	1	100% slip due to sinkage, SFC cracked & moist but not
317102	1	1	51	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	crumbly, 40% NW .5' or less (dead grass)
317202	1	1	51	0.029	0.50	20	16	14	17	30	42	40	51	53	17	16	21	38	39	0.99	0.70	0.02	9.99	0.03	16	11	12	999	32	0	100% slip due to sinkage, SFC cracked & dry but not
317202	1	1	51	0.029	0.50	12	15	17	22	27	30	30	41	45	15	10	22	26	31	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	crumbly, 70% NW .5' or less (dead grass)
317302	1	1	29	0.029	0.50	31	26	24	23	31	51	58	51	55	27	24	26	35	44	0.61	0.00	0.74	9.99	0.00	10	21	19	999	39	0	100% slip, SFC cracked & dry, but not crumbly 20% NW .5'
317302	1	1	29	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	or less (dead grass)
317402	1	1	29	0.029	0.50	51	30	27	30	41	56	50	62	65	36	28	32	42	82	0.71	0.83	0.75	9.99	0.74	20	23	24	999	30	0	100% slip due to sinkage, dragging on 2d pass, SFC cracked
317402	1	1	29	0.029	0.50	20	25	26	34	40	44	50	54	60	24	30	35	40	45	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	but not crumbly 10% NW .5' or less (dead grass)
317502	1	1	29	0.029	0.50	29	20	19	20	42	47	40	54	58	23	20	27	36	44	0.07	0.83	0.68	9.99	0.01	15	17	10	999	37	0	100% slip, SFC cracked not crumbly, dry; 50% NW .5 or less
317502	1	1	29	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	(dead grass)
317602	1	1	31	0.029	0.50	20	20	20	22	30	42	47	30	54	23	21	27	34	43	0.77	0.00	0.01	9.99	0.73	10	10	22	999	31	0	100% slip, SFC cracked & dry, not crumbly, 70% NW .5' or
317602	1	1	31	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	less (dead grass)
317702	1	1	31	0.029	0.50	29	22	18	21	30	45	51	58	56	23	20	26	35	40	0.77	0.08	0.81	9.99	0.73	10	10	21	999	33	0	100% slip, SFC cracked & dry, not crumbly, 60% NW .5' or
317702	1	1	31	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	less (dead grass)
317802	1	1	20	0.029	0.50	34	23	16	20	40	30	43	45	40	24	22	20	35	40	0.64	0.60	0.81	9.99	0.70	15	15	23	999	31	0	100% slip, SFC cracked & dry, not crumbly; 70% NW .5' or
317802	1	1	29	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	less (dead grass)
317902	1	1	29	0.029	0.50	53	32	27	34	54	57	50	61	63	37	31	38	40	57	0.60	0.72	0.73	9.99	0.74	24	22	28	999	42	8	100% slip due to sinkage, dragging on 1st pass, SFC cracked
317902	1	1	29	0.029	0.50	26	30	32	37	39	41	40	52	54	29	33	36	39	43	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	not crumbly; 20% NW .5' or less (dead grass)
318002	1	1	29	0.029	0.50	42	26	16	18	32	42	48	40	50	29	21	23	31	40	0.62	0.79	0.72	9.99	9.99	10	16	17	999	999	8	SFC cracked, not crumbly; 50% NW .5' or less (dead grass)
318002	1	1	29	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
318102	1	1	51	0.029	0.50	21	12	11	21	34	39	30	42	44	15	15	22	30	30	0.70	0.86	0.54	9.99	0.98	11	8	12	999	39	0	100% slip; SFC cracked not crumbly, SFC moist; 10% NW .5'
318102	1	1	91	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	or less (dead grass)
318202	1	1	91	0.029	0.50	15	11	9	12	36	38	34	38	34	12	11	16	33	38	0.97	0.04	0.69	9.99	0.08	7	9	11	999	25	0	Same as 181 except veg 50% NW .5' or less (dead grass)

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER .AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/W	B	B/R	SLIP PCNT
315302	73.0	999.9	999.9	84.4	999.9	999.9	95.0	999.9	999.9	67.2	999.9	999.9	50.4	999.9	999.9	46.2	999.9	999.9	59.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	600	0.13	799	99999	80
315402	63.0	999.9	999.9	75.1	999.9	999.9	97.3	999.9	999.9	77.7	999.9	999.9	53.0	999.9	999.9	45.9	999.9	999.9	54.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1000	0.30	1200	99999	80
315502	61.0	999.9	999.9	64.3	999.9	999.9	63.6	999.9	999.9	78.7	999.9	999.9	58.3	999.9	999.9	61.7	999.9	999.9	58.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2339	0.47	2000	99999	80
315602	91.0	999.9	999.9	80.0	999.9	999.9	83.7	999.9	999.9	66.2	999.9	999.9	62.6	999.9	999.9	51.3	999.9	999.9	60.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1907	0.30	1000	99999	80
315702	76.9	999.9	999.9	80.3	999.9	999.9	92.0	999.9	999.9	59.6	999.9	999.9	51.6	999.9	999.9	47.3	999.9	999.9	64.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	5.0	400	0.00	99999	99999	100
315802	72.0	999.9	999.9	86.0	999.9	999.9	102.0	999.9	999.9	60.1	999.9	999.9	52.3	999.9	999.9	43.6	999.9	999.9	63.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1210	0.84	99999	99999	80
315902	64.0	999.9	999.9	88.2	999.9	999.9	93.5	999.9	999.9	73.5	999.9	999.9	50.4	999.9	999.9	49.0	999.9	999.9	57.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3900	0.71	2500	99999	80
316002	59.7	999.9	999.9	80.0	999.9	999.9	45.0	999.9	999.9	70.6	999.9	999.9	63.5	999.9	999.9	59.0	999.9	999.9	54.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	0.0	3300	0.67	2100	99999	80
316102	44.2	999.9	999.9	90.6	999.9	999.9	54.0	999.9	999.9	64.9	999.9	999.9	65.0	999.9	999.9	67.5	999.9	999.9	61.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	9.0	3400	0.69	2100	99999	80
316202	66.0	999.9	999.9	90.6	999.9	999.9	73.1	999.9	999.9	70.7	999.9	999.9	44.4	999.9	999.9	58.3	999.9	999.9	57.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.4	11.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
316302	71.0	999.9	999.9	84.2	999.9	999.9	79.6	999.9	999.9	81.0	999.9	999.9	52.2	999.9	999.9	53.6	999.9	999.9	52.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.9	11.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
316402	67.0	999.9	999.9	80.4	999.9	999.9	64.9	999.9	999.9	70.6	999.9	999.9	48.4	999.9	999.9	60.0	999.9	999.9	53.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.3	10.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316502	89.0	999.9	999.9	90.2	999.9	999.9	103.9	999.9	999.9	87.1	999.9	999.9	44.0	999.9	999.9	43.0	999.9	999.9	48.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.0	10.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316602	88.4	999.9	999.9	88.2	999.9	999.9	86.9	999.9	999.9	79.3	999.9	999.9	48.6	999.9	999.9	58.1	999.9	999.9	55.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.7	10.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
316702	88.1	999.9	999.9	87.2	999.9	999.9	99.0	999.9	999.9	81.1	999.9	999.9	49.2	999.9	999.9	45.0	999.9	999.9	53.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.2	10.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316802	76.7	999.9	999.9	88.2	999.9	999.9	78.7	999.9	999.9	79.1	999.9	999.9	53.1	999.9	999.9	54.9	999.9	999.9	55.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
316802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.3	11.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
316902	58.6	999.9	999.9	56.4	999.9	999.9	44.8	999.9	999.9	40.1	999.9	999.9	71.6	999.9	999.9	73.2	999.9	999.9	70.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3300	0.69	2000	99999	80
317002	34.9	999.9	999.9	36.0	999.9	999.9	45.7	999.9	999.9	50.0	999.9	999.9	69.4	999.9	999.9	69.6	999.9	999.9	60.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2900	0.90	1000	99999	80
317102	54.0	999.9	999.9	66.0	999.9	999.9	96.0	999.9	999.9	77.5	999.9	999.9	57.4	999.9	999.9	46.6	999.9	999.9	54.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	6.0	99999	9.99	99999	99999	999
317102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.3	13.0	99.9	99.9	99.5	99999	9.99	99999	99999	999
317202	68.0	999.9	999.9	60.0	999.9	999.9	81.4	999.9	999.9	60.5	999.9	999.9	59.6	999.9	999.9	52.0	999.9	999.9	64.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.5	99999	9.99	99999	99999	999
317202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.0	13.4	99.9	99.9	99.5	99999	9.99	99999	99999	999
317302	40.2	999.9	999.9	66.6	999.9	999.9	81.0	999.9	999.9	56.9	999.9	999.9	62.0	999.9	999.9	52.5	999.9	999.9	64.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.6	10.3	99.9	99.9	99.5	99999	9.99	99999	99999	999
317402	30.7	999.9	999.9	34.6	999.9	999.9	79.5	999.9	999.9	58.0	999.9	999.9	66.2	999.9	999.9	53.9	999.9	999.9	65.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.2	11.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
317502	30.6	999.9	999.9	60.5	999.9	999.9	66.9	999.9	999.9	79.7	999.9	999.9	62.9	999.9	999.9	60.4	999.9	999.9	54.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.4	10.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
317602	44.1	999.9	999.9	64.0	999.9	999.9	87.0	999.9	999.9	60.3	999.9	999.9	58.5	999.9	999.9	58.2	999.9	999.9	60.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.5	10.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
317702	64.1	999.9	999.9	64.0	999.9	999.9	87.0	999.9	999.9	60.3	999.9	999.9	58.5	999.9	999.9	58.2	999.9	999.9	60.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.0	11.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
317802	91.2	999.9	999.9	60.0	999.9	999.9	71.4	999.9	999.9	67.0	999.9	999.9	62.0	999.9	999.9	57.2	999.9	999.9	50.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.2	8.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
317902	60.0	999.9	999.9	68.6	999.9	999.9	88.8	999.9	999.9	67.2	999.9	999.9	62.0	999.9	999.9	52.0	999.9	999.9	59.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
317902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.4	10.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
318002	40.4	999.9	999.9	60.0	999.9	999.9	93.2	999.9	999.9	64.7	999.9	999.9	60.2	999.9	999.9	51.5	999.9	999.9	63.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
318002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
318102	61.7	999.9	999.9	70.0	999.9	999.9	91.6	999.9	999.9	72.0	999.9	999.9	55.3	999.9	999.9	40.6	999.9	999.9	57.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
318102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.6	11.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
318202	62.0	999.9	999.9	70.9	999.9	999.9	90.7	999.9	999.9	66.1	999.9	999.9	52.4	999.9	999.9	48.9	999.9	999.9	51.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-26

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
310202	1	1	51	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
310302	1	1	51	0.025	0.50	10	[illegible]	12	23	41	52	56	59	67	14	15	25	39	50	0.64	0.65	0.53	9.99	1.07	9	13	13	999	50	3	100% slip; sfc cracked not crumbly traveling to lakeshore.
310302	1	1	51	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
310402	1	1	51	0.025	0.50	10	11	11	23	39	40	56	60	60	13	15	24	37	40	0.58	0.64	0.57	9.99	0.78	8	13	10	999	35	0	Soil cracked, no water in cracks, 100% slip
310402	1	1	51	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
310502	1	1	51	0.025	0.50	20	10	20	32	52	65	74	76	86	23	24	35	50	62	0.60	0.62	0.61	9.99	0.55	14	15	21	999	36	0	Ground cracked, 100% slip, 20% dead veg coverage
310502	1	1	51	0.025	0.50	14	22	25	36	47	62	72	80	85	20	23	36	40	60	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	16	
310602	1	1	51	0.025	0.50	26	12	12	30	40	44	46	60	95	17	18	27	38	43	0.59	0.50	0.69	9.99	0.73	10	10	10	999	31	0	" " ½ filled with water, 100% slip, 20% dead veg
310602	1	1	51	0.025	0.50	5	21	23	30	36	44	54	60	86	16	24	29	38	46	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
310702	1	1	51	0.025	0.50	26	21	17	19	20	35	48	60	95	21	19	21	29	38	0.71	0.70	0.62	9.99	0.53	15	14	17	999	21	0	100% slip, SFC cracks ~8" deep, 2" wide
310702	1	1	51	0.025	0.50	7	13	21	25	30	38	41	40	46	13	19	24	28	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	5	
310802	1	1	63	0.025	0.50	32	34	25	29	33	51	51	54	59	37	20	20	36	45	0.61	0.60	0.55	9.99	0.79	30	19	15	999	36	0	" " "
310802	1	1	63	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
310902	1	1	63	0.025	0.50	56	34	30	38	38	57	60	60	60	40	31	33	42	82	0.75	0.77	0.70	9.99	0.?	36	24	26	999	41	0	" " "
310902	1	1	63	0.025	0.50	17	23	24	29	39	48	40	48	51	21	29	29	35	41	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
319002	1	1	63	0.025	0.50	59	47	18	20	44	59	61	60	60	49	34	33	43	59	0.70	0.67	0.64	9.99	0.00	32	23	21	999	37	0	" ", SFC dry, badly cracked, crumbly
319002	1	1	63	0.025	0.50	17	21	22	26	30	39	40	41	44	20	23	26	29	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
319102	1	1	63	0.025	0.50	75	66	48	41	65	99	73	80	89	63	52	51	55	64	0.00	0.2	0.79	9.99	0.77	43	37	30	999	49	0	" " "
319102	1	1	63	0.025	0.50	32	29	37	41	43	45	58	56	66	33	30	40	43	47	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	8	
319202	2	1	64	0.025	0.50	28	28	29	24	37	55	58	56	60	27	20	29	39	49	0.59	0.72	0.73	9.99	0.02	10	19	21	999	48	0	" " " damp " "
319302	2	1	64	0.025	0.50	37	20	18	19	28	44	48	54	58	20	22	22	30	40	0.66	0.79	0.04	9.99	0.01	18	17	18	999	32	0	" " "
319402	2	1	64	0.025	0.50	18	14	18	12	14	29	38	38	38	14	12	12	18	29	0.70	0.73	0.74	9.99	0.05	10	9	9	999	18	0	" " "
319502	1	1	63	0.025	0.50	61	49	41	42	48	77	81	85	85	50	44	40	60	73	0.62	0.62	0.62	9.99	0.01	31	27	38	999	59	0	
319502	1	1	63	0.025	0.50	24	24	27	31	34	43	47	51	59	25	27	31	37	42	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
319602	1	1	63	0.025	0.50	48	30	30	46	61	4	79	83	85	41	30	46	58	71	0.56	0.66	0.75	9.99	0.71	23	25	35	999	50	0	" " "
319602	1	1	63	0.025	0.50	37	31	30	39	45	48	54	61	67	31	35	40	44	49	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
319702	1	1	63	0.025	0.50	73	53	48	46	50	53	50	59	50	56	47	49	52	56	0.00	0.0	0.1	9.99	0.06	30	33	38	999	37	0	" " ; SFC cracked, no water in cracks.
319702	1	1	63	0.025	0.50	27	32	27	25	27	39	48	47	52	29	20	26	29	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	8	
319802	1	1	63	0.025	0.50	20	30	21	18	34	41	58	59	97	20	23	24	31	42	0.59	0.60	0.70	9.99	0.63	15	18	18	999	44	0	" " " and damp, water in cracks.
319802	1	1	63	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
319902	1	1	63	0.025	0.50	40	41	31	20	42	46	54	54	96	40	38	34	39	47	0.61	0.63	0.64	9.99	0.74	26	21	22	999	35	0	" " " " no " "
319902	1	1	63	0.025	0.50	18	24	20	28	34	37	43	40	94	23	26	29	33	30	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
320002	1	1	63	0.025	0.50	97	91	42	40	59	97	62	07	72	50	44	4	52	59	0.71	0.71	0.71	9.99	0.92	36	31	33	999	56	0	" " "
320002	1	1	63	0.025	0.50	29	34	33	41	43	50	56	67	72	31	36	39	45	58	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
320102	1	1	35	0.025	0.50	40	42	30	27	46	91	50	57	99	40	33	34	41	52	0.00	0.68	0.73	9.99	0.04	24	21	26	999	30	0	" " "
320102	1	1	35	0.025	0.50	29	20	30	35	36	42	40	92	96	20	31	34	30	41	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
320202	1	1	35	0.025	0.50	26	24	19	14	20	39	44	81	93	21	17	16	24	34	0.64	0.02	0.69	9.99	0.0	18	16	11	999	24	0	" " "
320202	1	1	35	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
320302	1	1	35	0.025	0.50	30	32	19	18	34	49	58	59	90	27	23	24	34	45	0.73	0.73	0.67	9.99	0.67	20	17	16	999	30	0	" " "
320302	1	1	35	0.025	0.50	29	20	30	41	40	92	53	54	97	20	33	42	67	81	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
320402	1	1	35	0.025	0.50	22	22	14	13	83	40	40	88	95	19	17	17	36	37	0.61	0.66	0.56	9.99	0.67	8	11	18	999	25	0	" " "
320402	1	1	35	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
320502	1	1	35	0.025	0.50	30	35	20	18	30	49	92	89	62	31	24	22	31	42	0.79	0.77	0.60	9.99	0.72	24	19	10	999	30	0	" " "
320502	1	1	35	0.025	0.50	24	23	36	39	49	58	94	59	90	20	33	41	47	58	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
320602	1	1	35	0.025	0.50	30	25	18	19	33	46	91	54	56	24	21	23	33	43	0.63	0.62	0.77	9.99	0.70	19	13	18	999	34	0	" " "
320602	1	1	35	0.025	0.50	21	22	34	42	49	93	99	57	60	26	33	42	46	52	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
320702	1	1	35	0.025	0.50	36	30	25	22	42	92	59	92	61	32	20	38	39	51	0.60	0.63	0.78	9.99	0.00	22	18	23	999	41	0	" " "
320702	1	1	35	0.025	0.50	29	26	39	42	47	56	58	59	60	38	36	43	48	58	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CI	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	S	S/R	SLIP PONT
310202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.1	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
310302	62.7	999.9	999.9	60.1	999.9	999.9	60.4	999.9	999.9	64.2	999.9	999.9	52.4	999.9	999.9	50.1	999.9	999.9	62.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.9	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
310402	64.2	999.9	999.9	70.7	999.9	999.9	74.9	999.9	999.9	65.5	999.9	999.9	54.0	999.9	999.9	54.4	999.9	999.9	61.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.5	11.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
310502	55.9	999.9	999.9	76.0	999.9	999.9	64.4	999.9	999.9	75.5	999.9	999.9	53.3	999.9	999.9	60.7	999.9	999.9	56.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.6	13.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
310602	62.1	999.9	999.9	70.2	999.9	999.9	71.0	999.9	999.9	69.6	999.9	999.9	53.4	999.9	999.9	55.4	999.9	999.9	58.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.9	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
310702	54.2	999.9	999.9	60.2	999.9	999.9	49.5	999.9	999.9	59.0	999.9	999.9	56.6	999.9	999.9	67.6	999.9	999.9	59.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310802	62.9	999.9	999.9	54.2	999.9	999.9	77.5	999.9	999.9	62.6	999.9	999.9	65.0	999.9	999.9	54.6	999.9	999.9	62.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310902	41.1	999.9	999.9	57.0	999.9	999.9	76.4	999.9	999.9	60.9	999.9	999.9	63.5	999.9	999.9	54.9	999.9	999.9	63.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
310902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319002	62.9	999.9	999.9	60.0	999.9	999.9	60.1	999.9	999.9	60.7	999.9	999.9	60.6	999.9	999.9	50.4	999.9	999.9	63.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	22.9	10.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
319102	56.2	999.9	999.9	60.6	999.9	999.9	60.1	999.9	999.9	61.9	999.9	999.9	71.3	999.9	999.9	64.2	999.9	999.9	64.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319202	50.1	999.9	999.9	51.9	999.9	999.9	60.5	999.9	999.9	61.6	999.9	999.9	58.5	999.9	999.9	63.3	999.9	999.9	63.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3000	0.60	1700	99999	999
319302	50.0	999.9	999.9	52.2	999.9	999.9	65.5	999.9	999.9	76.7	999.9	999.9	66.0	999.9	999.9	60.0	999.9	999.9	54.1	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	2000	0.55	1600	99999	999
319402	60.0	999.9	999.9	60.0	999.9	999.9	97.4	999.9	999.9	66.3	999.9	999.9	58.6	999.9	999.9	46.2	999.9	999.9	61.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3230	0.65	1000	99999	999
319502	43.9	999.9	999.9	58.1	999.9	999.9	56.5	999.9	999.9	59.2	999.9	999.9	69.9	999.9	999.9	67.2	999.9	999.9	62.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	20.3	17.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
319602	40.0	999.9	999.9	56.6	999.9	999.9	46.9	999.9	999.9	60.4	999.9	999.9	66.5	999.9	999.9	60.4	999.9	999.9	59.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	16.0	15.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
319702	51.0	999.9	999.9	60.6	999.9	999.9	56.0	999.9	999.9	50.6	999.9	999.9	74.2	999.9	999.9	67.5	999.9	999.9	64.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	20.9	20.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319802	56.0	999.9	999.9	60.6	999.9	999.9	76.6	999.9	999.9	57.3	999.9	999.9	61.0	999.9	999.9	54.1	999.9	999.9	64.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319802	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.7	20.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
319902	42.0	999.9	999.9	60.0	999.9	999.9	57.5	999.9	999.9	55.9	999.9	999.9	62.5	999.9	999.9	65.0	999.9	999.9	67.2	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
319902	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	19.2	21.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
320002	55.1	999.9	999.9	58.0	999.9	999.9	57.5	999.9	999.9	54.0	999.9	999.9	60.2	999.9	999.9	65.7	999.9	999.9	67.7	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	20.4	21.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
320102	50.7	999.9	999.9	47.2	999.9	999.9	59.0	999.9	999.9	58.7	999.9	999.9	45.2	999.9	999.9	64.0	999.9	999.9	71.3	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320102	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.8	19.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
320202	61.6	999.9	999.9	56.4	999.9	999.9	75.4	999.9	999.9	65.0	999.9	999.9	63.3	999.9	999.9	54.3	999.9	999.9	60.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.9	8.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
320302	54.1	999.9	999.9	50.2	999.9	999.9	75.1	999.9	999.9	66.6	999.9	999.9	43.6	999.9	999.9	54.5	999.9	999.9	59.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.2	8.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
320402	59.1	999.9	999.9	60.2	999.9	999.9	76.1	999.9	999.9	62.9	999.9	999.9	60.1	999.9	999.9	54.0	999.9	999.9	59.5	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.1	7.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
320502	48.1	999.9	999.9	56.2	999.9	999.9	72.4	999.9	999.9	70.3	999.9	999.9	57.3	999.9	999.9	56.7	999.9	999.9	57.4	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.6	8.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
320602	50.9	999.9	999.9	57.6	999.9	999.9	77.2	999.9	999.9	66.9	999.9	999.9	64.7	999.9	999.9	53.0	999.9	999.9	59.6	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.0	7.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
320702	56.0	999.9	999.9	67.0	999.9	999.9	57.3	999.9	999.9	65.7	999.9	999.9	59.7	999.9	999.9	65.2	999.9	999.9	60.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
320702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	7.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-27

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
3208.2	1	1	39	0.025	0.50	31	25	28	22	43	51	50	63	69	25	22	28	30	51	0.78	0.68	0.67	9.99	0.37	18	15	19	999	19	0	Ground badly cracked and damp; no water in cracks.
320802	1	1	39	0.025	0.50	21	25	39	45	51	55	58	61	65	28	36	45	50	55	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
320903	1	1	36	0.025	0.50	44	27	28	21	33	42	51	54	55	31	24	22	29	39	0.53	0.68	0.64	9.99	0.62	16	14	14	999	24	0	" " " " " " " at 6"
320903	1	1	36	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
321003	1	1	36	0.025	0.50	40	26	21	31	30	46	54	62	67	29	26	30	30	46	0.61	0.66	0.70	9.99	0.70	16	15	23	999	32	0	" cracked and damp; no water in cracks
321003	1	1	36	0.025	0.50	18	23	32	30	45	55	59	61	69	24	31	39	46	53	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
321103	1	1	36	0.025	0.50	40	34	24	19	21	33	48	40	51	37	27	21	24	33	0.58	0.82	0.78	9.99	0.72	21	14	15	999	24	2	Immob due to slipperiness
321103	1	1	36	0.025	0.50	22	15	13	25	35	41	44	46	50	17	18	25	34	40	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
321204	1	1	36	0.025	0.50	51	43	29	22	24	40	55	55	57	41	31	25	31	48	0.78	0.73	0.72	9.99	0.62	25	23	18	999	26	0	" " " " ; SFC damp; water in ruts
321204	1	1	36	0.025	0.50	31	17	18	30	44	47	49	51	57	22	24	33	42	47	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
321304	1	1	36	0.025	0.50	41	25	22	21	26	40	51	53	55	29	23	23	29	39	0.68	0.63	0.68	9.99	0.63	17	14	16	999	25	0	100% slip; ground cracked; water in ruts
321304	1	1	36	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
321404	1	1	36	0.025	0.50	57	44	36	29	37	51	50	59	60	44	33	27	34	45	0.58	0.56	0.69	9.99	0.69	23	18	19	999	38	0	Dragging on 5th pass; ground cracked; sfc damp.
321404	1	1	36	0.025	0.50	24	18	33	37	40	43	48	55	58	25	29	37	48	44	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
321504	1	1	36	0.025	0.50	42	31	20	22	29	50	53	58	57	33	26	26	34	44	0.57	0.72	0.68	9.99	0.58	19	19	17	999	23	0	100% slip; water in sfc cracks at 3".
321504	1	1	36	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
321604	1	1	36	0.025	0.50	47	39	29	27	31	57	62	74	71	37	30	29	38	58	0.58	0.68	0.68	9.99	0.68	19	28	20	999	34	0	100% slip; dragging on 2d pass
321604	1	1	36	0.025	0.50	25	17	21	39	44	49	53	62	66	21	26	38	44	49	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
321704	1	1	66	0.025	0.50	28	17	17	36	43	53	55	61	64	21	23	32	44	50	0.67	0.71	0.60	9.99	9.99	14	16	19	999	999	0	Ground badly cracked; sfc wet & sticky.
321704	1	1	66	0.025	0.50	24	14	19	35	48	48	52	58	60	17	21	38	41	47	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
321704	1	1	66	0.025	0.50	11	12	29	33	37	49	50	59	59	17	28	33	38	44	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	51	
321804	1	1	66	0.025	0.50	26	25	19	18	19	31	43	44	46	23	28	18	22	31	0.71	0.73	0.72	9.99	9.99	16	15	13	999	999	0	" " " veh dragging on 28th pass
321804	1	1	66	0.025	0.50	19	13	13	13	13	22	31	38	33	15	13	18	16	22	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
321804	1	1	66	0.025	0.50	8	9	15	20	32	34	37	48	48	11	17	24	31	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	51	
321902	1	1	22	0.025	0.50	8	11	18	12	16	36	37	41	48	18	11	13	21	38	0.72	0.67	0.68	9.99	9.99	7	7	9	999	999	0	Immob due to slipperiness
321902	1	1	22	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322002	1	1	22	0.025	0.50	18	15	12	13	16	39	39	43	46	15	13	14	21	38	0.74	0.64	0.52	9.99	9.99	11	8	7	999	999	0	Veh dragging only after 100% slip was reached
322002	1	1	22	0.025	0.50	12	12	8	7	15	29	28	31	39	11	9	18	16	22	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
322102	1	1	22	0.025	0.50	29	28	15	18	27	45	47	55	56	21	18	28	38	40	0.78	0.78	0.74	9.99	9.99	18	15	18	999	999	0	" " " " " " " "
322102	1	1	22	0.025	0.50	19	14	18	13	28	34	38	43	46	14	12	17	25	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
322202	1	1	66	0.025	0.50	18	18	8	12	18	37	41	60	50	9	18	18	22	32	0.69	0.78	0.72	9.99	9.99	6	7	9	999	999	0	SFC cracks 8" deep, 2" wide; dragging on 11th pass
322202	1	1	66	0.025	0.50	11	11	8	9	15	30	31	34	37	18	18	11	18	25	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322202	1	1	66	0.025	0.50	6	6	18	20	29	31	34	38	41	7	15	22	29	31	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
322302	1	1	66	0.025	0.50	34	19	15	18	31	46	51	59	56	19	17	21	32	43	0.73	0.75	0.69	9.99	9.99	16	13	16	999	999	0	Dragging on 30th pass; completed 50 pass with difficulty
322302	1	1	66	0.025	0.50	24	16	14	18	39	45	50	57	59	18	16	24	34	44	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322302	1	1	66	0.025	0.50	18	16	38	32	38	42	44	60	51	19	28	33	37	41	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	51	
322402	1	1	66	0.025	0.50	21	18	14	19	22	38	48	47	58	18	16	17	28	34	0.78	0.68	0.76	9.99	9.99	14	11	13	999	999	0	Dragging on 20th pass, veh tilted toward rt
322402	1	1	66	0.025	0.50	18	12	11	14	27	36	37	48	45	14	18	17	26	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322402	1	1	66	0.025	0.50	9	13	22	28	38	33	38	41	46	15	28	28	38	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	31	
322504	1	1	45	0.025	0.50	38	24	24	37	39	49	52	59	63	28	28	33	41	49	0.55	0.71	0.65	9.99	9.99	18	20	28	999	999	0	Axle dragging slightly; 100% slip.
322504	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322604	1	1	45	0.025	0.50	35	33	27	41	39	41	48	58	53	32	34	38	40	43	0.58	0.68	0.57	9.99	9.99	19	27	21	999	999	0	" " on 2d pass; sfc cracked (1"W x 6"D)
322604	1	1	45	0.025	0.50	26	28	29	37	45	52	50	63	69	27	31	37	45	52	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
322704	1	1	45	0.025	0.50	46	44	40	48	39	46	51	52	56	46	40	44	43	45	0.58	0.72	0.70	9.99	9.99	27	33	34	999	999	0	Veh " " 5th " " " " 100% slip.
322704	1	1	45	0.025	0.50	32	40	31	32	40	46	50	53	58	37	37	34	39	46	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
322804	1	1	45	0.025	0.50	36	24	24	46	46	52	61	65	73	28	31	39	48	53	0.66	0.78	0.78	9.99	9.99	18	22	27	999	999	0	" " slightly; SFC cracked (1"W x 6"D) 100% slip.
322804	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
322904	1	1	45	0.025	0.50	41	33	27	46	48	38	41	44	51	34	35	38	41	48	0.68	0.63	0.65	9.99	9.99	23	22	25	999	999	0	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/h	B	B/R	SLIP PCNT
320832	50.0	999.9	999.9	64.0	999.9	999.9	71.0	999.9	999.9	73.1	999.9	999.9	59.4	999.9	999.9	58.6	999.9	999.9	56.4	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
320832	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	8.5	8.4	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
320933	41.0	999.9	999.9	44.0	999.9	999.9	49.1	999.9	999.9	54.5	999.9	999.9	72.6	999.9	999.9	73.1	999.9	999.9	60.5	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
320933	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	7.0	8.6	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
321033	47.3	999.9	999.9	68.1	999.9	999.9	64.9	999.9	999.9	79.1	999.9	999.9	61.9	999.9	999.9	61.2	999.9	999.9	53.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
321033	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	7.4	7.1	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3211.3	42.3	999.9	999.9	46.6	999.9	999.9	45.3	999.9	999.9	58.6	999.9	999.9	73.2	999.9	999.9	75.2	999.9	999.9	66.5	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
321133	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	5.4	7.4	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3212.4	30.0	999.9	999.7	40.9	999.9	999.9	44.9	999.9	999.9	55.7	999.9	999.7	73.1	999.9	999.9	75.6	999.9	999.9	66.8	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3212.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	6.0	7.2	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3213.4	39.0	999.9	999.9	47.9	999.9	999.9	45.7	999.9	999.9	56.5	999.9	999.9	47.9	999.9	999.9	74.6	999.9	999.9	68.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3213.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	7.4	7.3	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3214.4	39.7	999.9	999.9	40.9	999.9	999.9	45.6	999.9	999.9	57.7	999.9	999.9	71.6	999.9	999.9	75.7	999.9	999.9	66.1	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3214.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	9.6	8.6	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3215.4	44.1	999.9	999.9	55.6	999.9	999.9	52.6	999.9	999.9	66.1	999.9	999.9	65.9	999.9	999.9	68.2	999.9	999.9	66.4	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3215.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	6.8	6.8	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3216.4	41.7	999.9	999.9	50.8	999.9	999.9	53.1	999.9	999.9	48.5	999.9	999.9	64.0	999.9	999.9	68.6	999.9	999.9	72.2	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3216.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	7.4	7.6	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3217.4	999.9	60.8	57.4	999.9	60.3	54.1	999.9	999.9	999.9	999.9	63.6	65.2	999.9	58.5	65.7	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3217.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	8.4	8.8	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3217.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	4.1	4.3	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3218.4	999.9	46.8	64.0	999.9	52.6	59.1	999.9	999.9	999.9	999.9	72.4	68.9	999.9	68.4	64.2	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3218.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	8.8	1.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3218.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	7.2	8.1	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3219.2	999.9	73.7	87.2	999.9	93.4	77.0	999.9	999.9	999.9	999.9	54.0	49.6	999.9	92.3	54.3	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3219.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3220.2	999.9	81.7	77.6	999.9	73.8	71.0	999.9	999.9	999.9	999.9	63.4	53.4	999.9	54.7	57.2	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
322002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3221.2	999.9	88.8	81.9	999.9	47.7	62.3	999.9	999.9	999.9	999.9	63.7	51.9	999.9	50.5	51.7	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	[illegible]	99999	999
3221.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3222.2	999.9	78.9	86.3	999.9	92.3	91.7	999.9	999.9	999.9	999.9	58.0	49.6	999.9	51.7	48.1	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	1.0	99999	9.99	[illegible]	99999	999
3222.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3222.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3223.2	999.9	63.9	84.9	999.9	74.8	54.1	999.9	999.9	999.9	999.9	68.3	50.4	999.9	54.8	64.8	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3223.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3223.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3224.2	999.9	80.9	78.2	999.9	56.3	68.1	999.9	999.9	999.9	999.9	64.3	51.8	999.9	64.1	56.4	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3224.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3224.2	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3225.4	999.9	58.8	50.8	999.9	59.4	55.8	999.9	999.9	999.9	999.9	62.0	63.1	999.9	61.9	68.2	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	4.0	99999	9.99	[illegible]	99999	999
3225.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	8.6	8.2	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3226.4	999.9	88.8	87.9	999.9	56.2	63.8	999.9	999.9	999.9	999.9	63.7	54.1	999.9	63.7	63.8	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	5.0	99999	9.99	[illegible]	99999	999
3226.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	11.2	11.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3227.4	999.9	48.9	47.3	999.9	52.8	65.4	999.9	999.9	999.9	999.9	77.4	72.9	999.9	67.6	68.4	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3227.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	13.3	14.3	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3228.4	999.9	65.1	59.0	999.9	42.2	62.1	999.9	999.9	999.9	999.9	66.5	63.0	999.9	61.2	61.5	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	4.0	99999	9.99	[illegible]	99999	999
3228.4	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	[illegible]	99999	999
3229.4	999.9	58.6	56.4	999.9	57.8	68.9	999.9	999.9	999.9	999.9	63.0	64.9	999.9	64.9	57.9	999.9	999.9	999.9	999.9	[illegible]	9.99	99.9	9.99	99.9	99.9	99.9	99.9	4.0	99999	9.99	[illegible]	99999	999

Table III-28

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24
322904	1	1	45	0.025	0.50	34	34	32	30	43	51	50	61	65
323004	1	1	45	0.025	0.50	36	27	25	42	43	40	53	60	66
323004	1	1	45	0.025	0.50	17	25	35	41	[illegible]	40	50	60	64
323104	1	1	45	0.025	0.50	45	37	30	30	[illegible]	45	50	50	66
323104	1	1	45	0.025	0.50	25	26	37	42	40	52	50	68	65
323204	1	1	45	0.025	0.50	30	30	20	31	43	47	54	50	66
323204	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999
323304	1	1	45	0.025	0.50	59	46	39	34	39	62	76	81	81
323304	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999
323404	1	1	45	0.025	0.50	62	52	52	34	44	53	50	49	54
323404	1	1	45	0.025	0.50	36	25	32	44	50	59	65	74	77
323504	1	1	45	0.025	0.50	63	40	30	32	30	56	65	72	79
323504	1	1	45	0.025	0.50	31	23	33	43	51	57	62	69	71
323602	1	1	47	0.025	0.50	32	22	21	32	43	52	50	71	79
323602	1	1	47	0.025	0.50	999	999	999	999	999	999	999	999	999
323702	1	1	47	0.025	0.50	53	36	30	61	53	49	40	40	60
323702	1	1	47	0.025	0.50	41	41	30	39	47	57	60	70	50
323802	1	1	47	0.025	0.50	41	26	29	47	49	49	50	60	79
323802	1	1	47	0.025	0.50	27	32	32	47	54	63	69	77	79
323902	2	1	64	0.025	0.50	60	64	59	50	50	70	[illegible]	44	41
324002	2	1	64	0.025	0.50	56	61	53	51	51	71	62	53	40
324102	2	1	64	0.025	0.50	56	60	60	61	52	70	70	50	50
324202	2	1	64	0.025	0.50	62	60	64	50	51	72	71	50	50
324302	2	1	64	0.025	0.50	65	84	83	71	60	81	82	50	47
324402	2	1	64	0.025	0.50	60	66	69	58	49	75	79	50	51
324502	2	1	64	0.025	0.50	59	79	75	56	66	84	67	81	50
324602	2	1	64	0.025	0.50	57	82	84	60	65	86	67	59	97
324702	1	1	47	0.025	0.50	58	31	20	33	34	53	50	50	68
324702	1	1	47	0.025	0.50	999	999	999	999	999	999	999	999	999
324804	1	1	47	0.025	0.50	20	49	36	27	33	52	62	60	75
324804	1	1	47	0.025	0.50	999	999	999	999	999	999	999	999	999
324904	1	1	47	0.025	0.50	42	54	40	34	44	44	42	41	46
324904	1	1	47	0.025	0.50	35	33	38	44	56	67	77	81	87
325004	1	1	47	0.025	0.50	28	39	34	29	32	33	61	60	74
325004	1	1	47	0.025	0.50	999	999	999	999	999	999	999	999	999
325104	1	1	47	0.025	0.50	31	51	44	30	37	47	40	44	51
325104	1	1	47	0.025	0.50	22	29	37	49	53	61	60	74	78
325204	1	1	47	0.025	0.50	35	53	44	36	36	44	[illegible]	90	96
325204	1	1	47	0.025	0.50	33	27	37	47	54	65	71	74	76
325304	1	1	47	0.025	0.50	28	40	42	34	45	52	50	80	66
325304	1	1	47	0.025	0.50	21	29	39	51	61	66	70	82	87
325404	1	1	45	0.025	0.50	20	39	33	27	33	58	59	66	74
325404	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999
325504	1	1	45	0.025	0.50	26	30	33	27	36	53	63	71	78
325504	1	1	45	0.025	0.50	999	999	999	999	999	999	999	999	999
325604	1	1	72	0.025	0.50	13	18	28	34	39	41	44	40	54
325604	1	1	72	0.025	0.50	7	22	25	27	31	35	38	40	47
325704	1	1	72	0.025	0.50	13	18	22	40	36	39	48	40	53

LOC, TEST AND AREA	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
322904	33	33	30	43	51	9.99	9.99	9.99	9.99	9.69	999	999	999	999	999	3	
323004	29	31	37	44	40	0.00	0.66	0.64	9.99	9.59	23	20	24	999	999	[illegible]	100% slip; SFC cracked & damp; 10% dead veg 6" or less
323004	20	34	40	45	50	9.99	9.99	9.79	9.99	9.99	999	999	999	999	999	2	
323104	37	35	37	42	[illegible]	0.64	0.57	0.63	9.99	9.99	24	20	22	999	999	0	" " " " 4% " " " "
323104	29	35	42	47	53	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
323204	31	20	33	40	40	0.68	0.72	0.61	9.99	9.99	21	21	20	999	999	0	" " " " " " " "
323204	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
323304	40	40	37	45	57	0.63	0.61	0.75	9.99	9.99	30	24	26	999	999	0	" " ; dragging on 2d pass
323304	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
323404	59	40	42	44	49	0.73	0.60	0.69	9.99	9.99	40	31	30	999	999	0	" " " " 4th pass; sfc cracks(1"W X 8"D)
323404	31	34	40	51	50	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
323504	50	39	36	42	53	0.59	0.69	0.69	9.99	9.99	20	27	25	999	999	0	" " " " " 1st " " " "
323504	29	33	40	50	57	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	water in cracks.
323602	29	29	30	42	51	0.79	0.87	0.64	9.99	9.99	18	14	23	999	999	0	Ground cracked; SFC damp; water in crack at 6" depth
323602	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
323702	42	49	51	53	49	0.77	0.79	0.65	9.99	9.99	32	34	33	999	999	0	" " " " "; dragging on 4th pass.
323702	40	39	41	40	56	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	8	
323802	32	34	42	47	51	0.60	0.71	0.79	9.99	9.99	22	24	33	999	999	0	" " " " " " " 3d pass.
323802	30	37	44	55	62	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
323902	61	50	56	59	61	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
324002	57	55	52	50	61	0.78	0.80	0.82	9.99	9.99	44	44	43	999	999	3	
324102	61	68	60	64	67	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
324202	65	63	50	60	60	0.74	0.79	0.77	9.99	9.99	40	41	40	999	999	0	
324302	77	79	71	71	74	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
324402	60	64	59	61	60	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
324502	71	70	66	69	72	0.88	0.70	0.74	9.99	9.99	62	55	40	999	999	0	
324602	74	79	71	78	73	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
324702	30	27	20	37	40	0.79	0.81	0.64	9.99	9.99	29	22	18	999	999	0	Ground sfc frozen to 1½" depth.
324702	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
324804	38	37	32	37	40	0.64	0.90	0.72	9.99	9.99	24	21	23	999	999	0	SFC cracks (2"W x 8"D) water in cracks at 6".
324804	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	water in ruts.
324904	40	40	42	41	44	0.88	0.88	0.69	9.99	9.99	31	37	29	999	999	0	Dragging on 6th pass; sfc cracks (1½"W X 9"D)
324904	31	37	40	56	67	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
325004	31	34	38	38	40	0.64	0.70	0.60	9.99	9.99	21	24	21	999	999	0	SFC cracked (2"W x 12"D) water in cracks at 4"
325004	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
325104	40	41	30	37	41	0.70	0.64	0.74	9.99	9.99	33	20	27	999	999	0	Dragging on 2d pass; sfc cracks 1½"W x 12"D) 30% NW veg
325104	30	36	49	53	59	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	6" or less.
325204	44	40	37	37	43	0.00	0.88	0.78	9.99	9.99	29	24	26	999	999	0	Dragging on 3d pass; sfc cracks 2" W x 8"D 10% NW veg
325204	29	37	40	55	64	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	5	6" or less
325304	40	42	44	44	51	0.02	0.74	6.72	9.99	9.99	28	31	20	999	999	0	Dragging on 2d pass; sfc cracks 2" W x 8"D 15% NW veg
325304	30	40	51	59	67	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	6" or less
325404	34	33	31	37	40	0.70	0.60	0.63	9.99	9.99	24	21	20	999	999	0	Some dragging; sfc cracks 1½"W x 8"D 20% NW Veg
325404	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	6" or less.
325504	33	33	38	39	51	0.08	0.60	0.61	9.99	9.99	27	22	20	999	999	0	Same dragging; sfc cracks 1"W x 8"D; 20% NW veg
325504	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	6 in.or less
325604	16	23	31	30	40	0.77	0.63	0.65	9.99	9.99	12	14	20	999	999	0	Dragging on 3d pass; 100% slip
325604	18	25	28	31	35	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
325704	18	27	33	31	37	0.70	0.07	0.72	9.99	9.99	14	20	24	999	999	6	" " 4th " " "

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
322914	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323014	999.0	39.3	30.5	999.0	50.7	63.1	999.0	999.0	999.0	999.0	62.2	63.8	999.0	67.8	61.9	999.0	999.0	999.0	999.0
323014	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323114	999.0	34.0	32.0	999.0	59.0	55.4	999.0	999.0	999.0	999.0	66.6	67.2	999.0	63.0	64.0	999.0	999.0	999.0	999.0
323114	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323214	999.0	30.7	60.1	999.0	54.6	50.4	999.0	999.0	999.0	999.0	63.6	64.7	999.0	66.0	63.5	999.0	999.0	999.0	999.0
323214	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323314	999.0	40.0	39.0	999.0	44.6	54.4	999.0	999.0	999.0	999.0	77.7	61.0	999.0	75.7	66.6	999.0	999.0	999.0	999.0
323314	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323414	999.0	41.0	47.4	999.0	53.0	40.7	999.0	999.0	999.0	999.0	76.2	71.7	999.0	67.6	70.6	999.0	999.0	999.0	999.0
323414	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323514	999.0	40.0	40.0	999.0	50.5	41.2	999.0	999.0	999.0	999.0	63.1	74.6	999.0	62.1	70.0	999.0	999.0	999.0	999.0
323514	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323612	999.0	37.0	70.0	999.0	45.0	60.7	999.0	999.0	999.0	999.0	64.0	52.2	999.0	60.4	62.3	999.0	999.0	999.0	999.0
323612	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323712	999.0	37.0	60.2	999.0	53.3	53.0	999.0	999.0	999.0	999.0	65.0	50.5	999.0	70.7	60.0	999.0	999.0	999.0	999.0
323712	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323812	999.0	40.3	40.0	999.0	35.6	62.3	999.0	999.0	999.0	999.0	37.2	69.5	999.0	64.6	62.6	999.0	999.0	999.0	999.0
323812	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
323912	999.0	30.0	47.3	999.0	46.6	40.4	999.0	999.0	999.0	999.0	76.4	67.4	999.0	60.2	999.0	999.0	999.0	999.0	999.0
324032	999.0	30.0	47.3	999.0	46.6	40.4	999.0	999.0	999.0	999.0	76.4	67.4	999.0	60.2	999.0	999.0	999.0	999.0	999.0
324132	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324232	999.0	41.7	40.1	999.0	54.7	53.3	999.0	999.0	999.0	999.0	69.3	65.9	999.0	60.7	65.6	999.0	999.0	999.0	999.0
324312	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324432	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324532	999.0	40.0	30.5	999.0	52.8	50.9	999.0	999.0	999.0	999.0	60.3	65.0	999.0	65.6	67.5	999.0	999.0	999.0	999.0
324612	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324712	999.0	66.0	72.6	999.0	70.4	71.8	999.0	999.0	999.0	999.0	55.5	53.1	999.0	50.1	56.7	999.0	999.0	999.0	999.0
324712	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324834	999.0	40.0	36.7	999.0	50.1	53.2	999.0	999.0	999.0	999.0	71.4	66.6	999.0	71.4	67.5	999.0	999.0	999.0	999.0
324834	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
324934	999.0	45.0	40.1	999.0	40.3	53.8	999.0	999.0	999.0	999.0	70.6	71.0	999.0	74.1	67.3	999.0	999.0	999.0	999.0
324934	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325034	999.0	47.0	36.0	999.0	53.3	55.9	999.0	999.0	999.0	999.0	67.9	62.5	999.0	60.0	67.2	999.0	999.0	999.0	999.0
325034	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325134	999.0	30.0	31.3	999.0	34.2	49.6	999.0	999.0	999.0	999.0	69.3	60.2	999.0	67.5	66.2	999.0	999.0	999.0	999.0
325134	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325234	999.0	40.7	30.2	999.0	40.2	49.6	999.0	999.0	999.0	999.0	76.3	67.0	999.0	74.0	70.2	999.0	999.0	999.0	999.0
325234	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325334	999.0	45.0	31.1	999.0	44.4	50.4	999.0	999.0	999.0	999.0	74.4	60.7	999.0	76.2	60.3	999.0	999.0	999.0	999.0
325334	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325434	999.0	40.7	35.4	999.0	50.0	47.1	999.0	999.0	999.0	999.0	60.1	65.3	999.0	64.2	73.1	999.0	999.0	999.0	999.0
325434	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325534	999.0	30.1	46.9	999.0	59.2	52.8	999.0	999.0	999.0	999.0	61.0	60.6	999.0	63.6	60.5	999.0	999.0	999.0	999.0
325534	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
325634	999.0	63.4	64.0	999.0	47.6	66.2	999.0	999.0	999.0	999.0	55.2	60.0	999.0	50.3	60.5	999.0	999.0	999.0	999.0
325634	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0	999.0
3257.4	999.0	66.0	78.4	999.0	50.0	65.6	999.0	999.0	999.0	999.0	53.0	57.4	999.0	54.0	61.2	999.0	999.0	999.0	999.0

LOC, TEST AND AREA	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/W	G	G/R	SLIP POINT
322914	99.0	9.99	99.0	9.99	11.6	12.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323014	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323014	99.0	9.99	99.0	9.99	9.1	9.6	99.0	99.0	99.0	99999	9.99	99999	99999	999
323114	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323114	99.0	9.99	99.0	9.99	11.2	11.4	99.0	99.0	99.0	99999	9.99	99999	99999	999
323214	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323214	99.0	9.99	99.0	9.99	13.2	10.6	99.0	99.0	99.0	99999	9.99	99999	99999	999
323314	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323314	99.0	9.99	99.0	9.99	[illegible]	11.9	99.0	99.0	99.0	99999	9.99	99999	99999	999
323414	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323414	99.0	9.99	99.0	9.99	11.3	13.5	99.0	99.0	99.0	99999	9.99	99999	99999	999
323514	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323514	99.0	9.99	99.0	9.99	[illegible]	[illegible]	99.0	99.0	99.0	99999	9.99	99999	99999	999
323612	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323612	99.0	9.99	99.0	9.99	11.0	11.9	99.0	99.0	99.0	99999	9.99	99999	99999	999
323712	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323712	99.0	9.99	99.0	9.99	11.6	13.3	99.0	99.0	99.0	99999	9.99	99999	99999	999
323812	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
323812	99.0	9.99	99.0	9.99	11.2	12.2	99.0	99.0	99.0	99999	9.99	99999	99999	999
323912	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	2900	1.60	1800	99999	17
324032	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3481	1.79	2281	99999	28
324132	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3481	1.73	2281	99999	28
324232	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3881	1.72	2881	99999	29
324312	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3881	1.53	2281	99999	28
324432	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3881	1.73	2281	99999	[illegible]
324532	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4880	1.80	2881	99999	30
324612	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	2900	1.80	1800	99999	16
324712	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
324712	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
324834	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
324834	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
324934	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
324934	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325034	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325034	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325134	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325134	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325234	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325234	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325334	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325334	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325434	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325434	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325534	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325534	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325634	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
325634	99.0	9.99	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
3257.4	99.0	9.99	99.0	9.99	11.0	12.4	99.0	99.0	99.0	99999	9.99	99999	99999	999

Table III-29

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH SOIL NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

REMARKS

100% slip; dragging on 2d pass; 25% NW veg 6" or less

100% slip; sfc cracks 2"W x 6"D; water in cracks at 2"
4" water in lt rut; none in rt.
100% slip; water in ruts at 4" depth.

Dragging on 1st pass; sfc cracks 3"W x 7"D; water in cracks at 4": 30% NW veg. 6" or less
100% slip; some sfc water

100% slip; no water in ruts

100% slip; small amount of water in ruts.

" " no water in ruts

" " " " " "

" " sfc cracks 2"W x 6"D; water in cracks @ 4"
20% NW veg 6" or less
100% slip; sfc cracks 2"W x 6"D; water in cracks @ 2"
no water in ruts.
Dragging on 3d pass; sfc cracked; 60% NW veg 6" or less

100% slip; veh did not drag; some water in ruts.

" " " " " " " " " "

Dragging on 8th pass; water in ruts after 1st pass;
100% slip; 40% NW veg 6" or less
100% slip; no veg; sfc wet

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEAROGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	θ	δ/B	SLIP PCNT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table III-30

LOC., TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 5	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
327701	1	1	58	0.375	0.50	39	42	38	43	42	46	49	49	46	48	41	41	44	46	0.91	0.62	0.61	9.99	9.69	36	25	25	999	999	0	100% slip due to sinkage; dragging on 2nd pass; heavy drag on 6th pass; no veg.
327701	1	1	58	0.375	0.50	71	43	48	46	36	37	49	48	49	53	[illegible]	[illegible]	45	39	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
327701	1	1	58	0.375	0.50	28	58	52	43	38	39	48	51	64	[illegible]	48	38	34	[illegible]	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
327801	1	1	58	0.375	0.50	43	48	41	51	49	59	53	60	61	[illegible]	47	47	52	52	0.61	0.68	0.68	9.99	9.99	2	32	32	999	999	5	100% slip due to sinkage; dragging on 4th pass; heavy dragging on 6th pass; slight tilt to rt; no veg.
327801	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
327801	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
327901	1	1	58	0.375	0.50	36	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43	43	39	36	38	0.51	0.48	0.57	9.99	9.99	22	21	22	999	999	0	100% slip due to sinkage; no tilt; no veg.
327901	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328001	1	1	58	0.375	0.50	38	46	43	32	34	38	41	43	58	[illegible]	[illegible]	38	37	38	0.51	0.48	0.57	9.99	9.99	21	28	22	999	999	0	100% slip due to sinkage; no veg.
328001	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	[illegible]	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328101	1	1	45	0.375	0.50	38	46	42	38	36	33	31	43	57	[illegible]	[illegible]	[illegible]	[illegible]	33	0.51	0.48	0.57	9.99	9.99	20	28	22	999	999	0	100% slip due to sinkage; no tilt; no veg.
328101	1	1	45	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328201	1	1	58	0.375	0.50	41	53	40	42	41	43	43	43	41	[illegible]	[illegible]	43	42	42	0.71	0.83	0.65	0.72	0.79	33	39	28	38	33	0	100% slip due to sinkage; dragging on 2nd pass; no tilt 80% NW veg 6" or less (grass).
328201	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328201	1	1	58	0.375	0.50	46	37	29	25	29	28	36	55	65	37	38	28	36	38	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
328301	1	1	58	0.375	0.50	41	47	48	38	37	37	46	43	43	43	[illegible]	39	37	38	0.71	0.83	0.65	0.72	0.79	38	35	28	27	38	0	100% slip due to sinkage; slight tilt to lf; 80% NW veg 6" or less (grass).
328301	1	1	58	0.375	0.50	80	[illegible]	[illegible]	32	34	34	36	38	42	30	37	33	33	35	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328301	1	1	58	0.375	0.50	54	47	29	24	25	28	36	53	57	43	38	28	26	30	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
328401	1	1	58	0.375	0.50	42	49	54	47	44	48	58	50	52	48	50	48	46	[illegible]	0.96	0.60	0.60	0.68	0.68	46	34	33	31	32	0	100% slip due to sinkage; no tilt; no veg.
328401	1	1	58	0.375	0.50	78	48	48	34	38	42	46	48	48	53	41	37	38	42	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328401	1	1	58	0.375	0.50	45	80	3	29	31	39	34	57	[illegible]	[illegible]	1	32	32	33	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	5	
328501	1	1	58	0.375	0.50	38	58	52	51	46	49	48	44	43	4	51	50	47	48	0.16	0.13	0.79	0.74	0.70	36	37	41	35	32	0	100% slip due to sinkage; dragging on 3rd pass; slight tilt to lt; no veg.
328501	1	1	58	0.375	0.50	40	64	51	27	36	36	31	41	58	54	4	35	36	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
328601	1	1	58	0.375	0.50	42	54	58	52	46	48	48	53	53	51	[illegible]	52	49	47	0.87	0.82	0.62	0.64	0.68	44	45	38	31	31	0	100% slip due to sinkage; slight tilt to lt; no veg.
328601	1	1	58	0.375	0.50	70	51	49	39	36	39	42	42	45	35	44	39	37	39	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
328701	1	1	58	0.375	0.50	46	53	51	49	44	48	51	58	52	58	30	[illegible]	46	48	0.81	0.83	0.80	0.80	0.79	48	41	42	37	34	0	100% slip due to sinkage; dragging on 4th pass; no veg.
328701	1	1	58	0.375	0.50	82	62	39	36	34	50	53	50	62	87	[illegible]	36	53	52	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328701	1	1	58	0.375	0.50	51	74	54	38	36	26	38	38	44	30	3	3	27	27	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	7	
328803	1	1	45	0.375	0.50	32	34	38	37	40	43	59	69	58	34	38	37	40	46	0.53	0.56	0.62	0.54	0.47	18	28	28	22	22	0	100% slip due to sinkage; 50% NW veg 2" or less (grass).
328803	1	1	45	0.375	0.50	999	999	999	999	999	999	999	999	999	[illegible]	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
328903	1	1	45	0.375	0.50	35	44	38	39	41	41	53	67	68	46	48	39	40	48	0.64	0.75	0.68	0.67	0.74	20	38	28	27	33	0	100% slip due to sinkage; 70% NW veg 2" or less (grass).
328903	1	1	45	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
329001	1	1	58	0.375	0.50	16	41	41	39	32	30	38	30	[illegible]	38	39	36	32	38	0.73	0.69	0.69	0.69	0.69	28	[illegible]	28	21	28	0	100% " " " " ; no veg.
329001	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
329001	1	1	58	0.375	0.50	31	22	21	33	37	43	58	51	42	21	22	24	31	40	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
329101	1	1	58	0.375	0.50	11	34	38	33	34	38	28	30	35	28	35	39	32	38	0.73	0.60	0.65	0.65	0.69	28	24	28	21	28	0	100% slip due to sinkage; no veg.
329101	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
329101	1	1	58	0.375	0.50	24	29	23	34	38	41	34	50	46	24	24	25	31	35	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
329201	1	1	58	0.375	0.50	44	43	43	47	48	46	44	40	39	48	44	46	47	46	1.00	0.87	0.50	0.50	0.68	42	29	26	27	28	0	100% slip due to sinkage; dragging on 4th pass; no veg.
329201	1	1	58	0.375	0.50	61	43	48	37	38	48	48	46	49	49	41	38	39	42	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
329201	1	1	58	0.375	0.50	37	49	57	41	39	33	37	39	42	44	49	44	36	35	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
329301	4	1	76	0.375	0.50	27	33	37	46	46	49	53	57	59	32	37	42	47	49	0.81	0.83	0.65	0.83	0.81	28	32	36	39	40	12	Run influenced by mud in tracks; see table 47
329401	4	1	76	0.375	0.50	32	41	43	42	42	45	47	48	47	39	48	43	43	45	0.81	0.83	0.73	9.99	9.99	31	30	31	999	999	99	See table 47
329501	4	1	66	0.375	0.50	32	41	43	42	42	45	47	48	47	39	48	48	43	45	0.81	0.83	0.73	9.99	9.99	31	30	31	999	999	99	
329601	3	1	66	0.375	0.50	20	41	44	45	[illegible]	44	42	43	43	38	43	[illegible]	45	44	0.82	0.72	0.74	0.65	0.56	31	31	33	29	29	99	SFC wet.
329701	3	1	66	0.375	0.50	29	49	42	30	48	38	37	39	39	37	42	40	39	38	0.82	0.72	0.74	0.65	0.56	38	38	38	38	21	99	" "
329801	3	1	66	0.375	0.50	38	46	58	51	40	40	40	40	43	49	40	50	47	43	0.82	0.72	0.74	0.65	0.56	37	38	37	30	24	99	" "
329901	3	1	66	0.375	0.50	28	46	44	48	38	35	34	38	38	37	44	41	38	36	0.82	0.72	0.74	0.65	0.56	38	32	30	25	20	99	" "

LOC., TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/h	B	B/R	SLIP PCNT
327701	999.9	36.8	38.6	999.9	37.6	48.1	999.9	999.9	999.9	999.9	76.4	81.4	999.9	83.8	74.3	999.9	999.9	999.9	999.9	1.0	0.53	0.5	0.53	99.9	99.9	99.9	99.9	19.0	99999	9.99	99999	99999	999
327701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
327701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	22.5	18.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
327801	999.9	36.8	38.6	999.9	37.0	4.0	999.9	999.9	999.9	999.9	76.4	81.4	999.9	83.8	74.3	999.9	999.9	999.9	999.9	0.5	0.65	0.5	0.53	99.9	99.9	99.9	99.9	19.0	99999	9.99	99999	99999	999
327801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
327801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
327901	999.9	44.0	38.3	999.9	41.4	63.6	999.9	999.9	999.9	999.9	19.9	68.3	999.9	21.0	88.9	999.9	999.9	999.9	999.9	1.0	0.73	2.0	0.21	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
327901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.7	11.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
328001	999.9	44.0	38.3	999.9	41.4	63.6	999.9	999.9	999.9	999.9	19.9	68.3	999.9	21.0	88.9	999.9	999.9	999.9	999.9	0.3	0.75	1.7	0.31	99.9	99.0	99.9	99.9	7.0	99999	9.99	99999	99999	999
328001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	8.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
328101	999.9	44.0	38.3	999.9	41.4	63.6	999.9	999.9	999.9	999.9	19.9	68.3	999.9	21.0	88.9	999.9	999.9	999.9	999.9	0.3	0.62	0.3	0.62	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
328101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.5	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328201	999.9	42.8	38.9	999.9	51.1	61.8	999.9	999.9	999.9	999.9	73.5	63.2	999.9	67.2	61.3	999.9	999.9	999.9	999.9	1.1	0.49	0.2	0.60	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999	999
328201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.0	8.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328301	999.9	42.8	38.9	999.9	51.1	61.8	999.9	999.9	999.9	999.9	73.5	63.2	999.9	67.2	61.3	999.9	999.9	999.9	999.9	1.1	0.49	4.0	0.11	99.9	99.9	99.9	99.9	15.0	99999	9.99	99999	99999	999
328301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.2	17.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328401	999.9	44.8	44.8	999.9	41.7	47.6	999.9	999.9	999.9	999.9	68.4	67.3	999.9	75.2	75.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	16.0	99999	9.99	99999	99999	999
328401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
328401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.5	13.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
328501	999.9	44.8	44.8	999.9	41.7	47.6	999.9	999.9	999.9	999.9	68.4	67.3	999.9	75.2	75.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	16.0	99999	9.99	99999	99999	999
328501	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.0	12.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
328601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	16.0	99999	9.99	99999	99999	999
328601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.5	18.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
328701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	16.0	99999	9.99	99999	99999	999
328701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.69	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
328701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.5	18.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
328803	999.9	85.8	79.2	999.9	76.9	65.6	999.9	999.9	999.9	999.9	61.3	56.8	999.9	58.9	58.7	999.9	999.9	999.9	999.9	1.1	0.49	4.0	0.42	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
328803	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	12.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
328903	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	4.2	0.38	99.9	99.9	99.9	99.9	11.0	99999	9.99	99999	99999	999
328903	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.5	13.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
329001	999.9	90.7	86.9	999.9	59.3	61.3	999.9	999.9	999.9	999.9	64.9	67.1	999.9	65.7	61.5	999.9	999.9	999.9	999.9	1.1	0.49	0.2	0.60	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
329001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
329001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
329101	999.9	90.7	86.5	999.9	59.3	61.3	999.9	999.9	999.9	999.9	64.9	67.1	999.9	65.7	61.5	999.9	999.9	999.9	999.9	1.1	0.49	0.2	0.60	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
329101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.0	99.9	99.9	99.5	99999	9.99	99999	99999	999
329101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
329201	999.9	35.6	28.3	999.9	35.3	37.3	999.9	999.9	999.9	999.9	73.9	86.2	999.9	84.5	82.0	999.9	999.9	999.9	999.9	99.9	9.99	1.2	0.51	99.9	99.9	99.9	99.9	19.0	99999	9.99	99999	99999	999
329201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
329201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	21.0	9.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
329301	999.9	36.0	38.0	999.9	39.2	4.6	999.9	999.9	999.9	999.9	71.0	65.0	999.9	70.1	70.9	999.9	999.9	999.9	999.9	99.9	9.99	1.2	0.51	0.5	0.5	99.9	99.9	16.0	99999	9.99	99999	99999	999
329401	999.9	33.4	39.0	999.9	38.5	44.0	999.9	999.9	999.9	999.9	77.0	79.9	999.9	76.1	66.0	999.9	999.9	999.9	999.9	99.9	9.99	1.2	0.51	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
329501	999.9	33.4	39.0	999.9	38.5	46.0	999.9	999.9	999.9	999.9	77.0	79.9	999.9	76.1	66.0	999.9	999.9	999.9	999.9	99.9	9.99	1.2	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
329601	999.9	43.3	46.6	999.9	44.5	48.7	999.9	999.9	999.9	999.9	75.3	74.6	999.9	67.0	58.0	999.9	999.9	999.9	999.9	99.9	9.99	1.1	0.51	1.0	1.0	20.5	20.5	99.9	99999	9.99	800	99999	6
329701	999.9	43.3	46.6	999.9	44.5	48.7	999.9	999.9	999.9	999.9	75.3	74.6	999.9	67.0	58.0	999.9	999.9	999.9	999.9	99.9	9.99	1.1	0.51	1.0	1.0	20.0	20.0	99.9	99999	9.99	700	99999	4
329801	999.9	43.3	46.6	999.9	44.5	48.7	999.9	999.9	999.9	999.9	75.3	74.6	999.9	67.0	58.0	999.9	999.9	999.9	999.9	99.9	9.99	1.1	0.51	0.8	0.8	20.0	20.0	99.9	99999	9.99	780	99999	2
329901	999.9	43.3	46.6	999.9	44.5	48.7	999.9	999.9	999.9	999.9	75.3	74.6	999.9	67.0	58.0	999.9	999.9	999.9	999.9	99.9	9.59	1.1	0.51	0.5	0.5	20.0	20.0	99.9	99999	9.99	600	99999	2

Table III-31

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 5	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
330001	3	1	77	0.375	0.50	21	36	30	40	34	30	36	30	31	32	30	37	35	31	0.05	0.70	0.72	0.70	[illegible]	21	29	27	[illegible]	[illegible]	[illegible]	
330001	3	1	77	0.375	0.50	22	30	43	42	36	29	20	30	20	35	41	40	36	31	0.05	0.70	0.72	0.70	[illegible]	23	31	20	29	[illegible]	[illegible]	
330001	3	1	77	0.375	0.50	36	45	49	47	46	52	44	30	40	43	47	47	40	47	0.05	0.70	0.72	0.70	[illegible]	20	30	34	34	[illegible]	0	
330001	3	1	77	0.375	0.50	32	45	53	52	44	44	42	37	36	43	49	49	46	43	0.05	0.70	0.72	0.70	[illegible]	20	37	35	32	[illegible]	0	
330101	3	1	76	0.375	0.50	21	36	30	40	34	30	30	20	31	32	30	37	35	31	0.05	0.70	0.72	0.70	[illegible]	21	29	27	[illegible]	[illegible]	0	
330101	3	1	76	0.375	0.50	22	30	43	42	36	29	20	30	20	35	41	40	36	31	0.05	0.70	0.72	0.70	[illegible]	23	31	20	29	[illegible]	0	
330101	3	1	76	0.375	0.50	36	45	49	47	46	52	44	30	40	43	47	47	40	47	0.05	0.70	0.72	0.70	[illegible]	20	30	34	34	[illegible]	0	
330101	3	1	76	0.375	0.50	32	45	53	52	44	44	42	37	36	43	49	49	46	43	0.05	0.70	0.72	0.70	[illegible]	20	37	38	38	[illegible]	0	
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	CI taken at intervals across blue hole area.
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	RI taken at 1/4 and 3/4 of lane.
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330301	2	1	76	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	Same soil data as test 303.
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.09	0.74	0.77	0.70	0.74	20	30	37	36	35	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330401	2	1	66	0.375	0.50	20	47	50	40	46	47	40	47	40	42	40	40	47	47	0.08	0.74	0.64	0.64	0.64	20	30	31	30	30	99	
330502	4	1	66	0.375	0.50	20	35	43	43	40	40	60	53	40	33	40	40	44	51	0.00	0.67	0.71	0.70	0.00	26	27	30	31	35	99	See table 47.
330602	4	1	66	0.375	0.50	20	35	43	43	40	40	60	53	40	33	40	40	44	51	0.00	0.67	0.71	0.70	0.00	26	27	30	31	35	99	Heavy mud in tracks. See table 47.
330702	4	1	66	0.375	0.50	20	35	43	43	40	40	60	53	40	33	40	40	44	51	0.00	0.67	0.71	0.70	0.00	26	27	30	31	35	99	See table 47.
330802	4	1	66	0.375	0.50	20	35	44	43	40	40	60	53	40	33	40	42	44	51	0.00	0.67	0.71	0.70	0.00	26	27	30	31	35	99	" " "
330903	1	1	70	0.375	0.50	1	2	13	22	30	20	22	21	23	9	12	13	21	21	0.70	0.82	0.70	0.02	0.09	4	6	14	17	19	0	100% slip due to sinkage; dragging on 2nd pass; slight tilt to rt; no veg.
330903	1	1	71	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	4	6	21	17	19	7	
331001	1	1	96	0.375	0.50	29	53	40	30	36	37	41	40	94	47	46	41	3[illegible]	30	0.04	0.71	0.03	0.69	0.79	30	33	20	26	27	8	100% slip due to sinkage; slight tilt to rt; 80% NW veg 3" or less.
331001	1	1	96	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	30	33	26	30	20	1	
331101	1	1	96	0.375	0.50	37	54	58	40	42	43	40	40	92	[illegible]	40	40	42	45	0.71	0.64	0.07	0.50	0.32	33	31	30	24	22	0	100% slip due to sinkage; no tilt; 80% NW veg 3" or less.
331101	1	1	96	0.375	0.50	31	37	27	28	30	40	50	63	63	32	31	26	33	45	9.99	9.99	9.99	9.99	9.99	12	31	30	24	22	2	
331201	1	1	96	0.375	0.50	46	62	58	44	44	49	58	55	60	53	55	47	45	43	0.55	0.72	0.78	0.72	0.74	20	30	33	33	30	0	100% slip due to sinkage; no tilt; 80% NW veg 3" or less
331201	1	1	96	0.375	0.50	35	31	20	31	43	53	50	61	97	31	25	33	42	51	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
331301	3	1	76	0.375	0.50	67	70	70	70	74	73	60	76	76	72	73	71	72	72	1.00	0.71	0.78	9.99	9.99	72	58	51	999	999	99	
331401	3	1	76	0.375	0.50	53	65	62	54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	60	61	58	59	63	1.00	0.71	0.78	9.99	9.99	60	43	48	999	999	99	
331501	3	1	76	0.375	0.50	56	65	57	54	50	63	64	63	60	59	59	57	59	62	1.00	0.71	0.78	9.99	9.99	59	48	41	999	999	99	
331601	3	1	76	0.375	0.50	55	70	70	71	63	65	60	61	73	70	75	71	66	63	1.00	0.71	0.78	9.99	9.99	70	53	50	999	999	99	
331701	3	1	96	0.375	0.50	67	70	71	70	74	73	60	76	76	72	73	71	72	72	1.00	0.71	0.78	9.99	9.99	72	58	51	999	999	99	
331801	3	1	96	0.375	0.50	53	65	62	54	50	[illegible]	[illegible]	65	56	60	61	58	59	63	1.00	0.71	0.78	9.99	9.99	60	43	48	999	999	99	
331901	3	1	96	0.375	0.50	56	65	57	54	50	63	64	63	60	59	59	57	59	62	1.00	0.71	0.78	9.99	9.99	59	42	41	999	999	99	
332001	3	1	96	0.375	0.50	55	70	70	71	63	65	60	60	73	70	75	70	66	63	1.00	0.71	0.78	9.99	9.99	70	53	50	999	999	99	
332102	3	1	76	0.375	0.50	18	30	42	30	37	51	54	51	44	33	41	39	42	47	0.72	0.50	0.66	0.50	0.50	29	22	30	34	24	99	
332202	3	1	76	0.375	0.50	11	33	40	35	30	49	40	43	40	20	36	30	41	40	0.72	0.50	0.66	0.50	0.51	20	20	25	24	23	99	
332302	3	1	76	0.375	0.50	12	32	37	38	41	53	52	40	46	27	36	39	44	40	0.72	0.50	0.66	0.50	0.50	19	28	26	26	25	99	
332402	3	1	76	0.375	0.50	17	40	45	37	36	47	42	39	38	34	41	39	40	42	0.72	0.50	0.66	0.90	0.50	24	23	26	23	21	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	B	G/R	SLIP POINT
330001	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.2	1.2	25.0	25.0	99.9	99999	9.99	3150	99999	2
330001	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.5	1.5	26.0	26.0	99.9	99999	9.99	2000	99999	3
330001	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.2	1.2	23.0	23.0	99.9	99999	9.99	1900	99999	5
330001	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.8	0.8	20.0	20.0	99.9	99999	9.99	2900	99999	8
330101	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.5	1.5	26.0	26.0	99.9	99999	9.99	3900	99999	2
330101	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.0	1.0	23.2	23.2	99.9	99999	9.99	2900	99999	6
330101	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	1.2	1.2	23.2	23.2	99.9	99999	9.99	2800	99999	6
330101	999.9	42.8	98.5	999.9	999.9	43.5	999.9	999.9	999.9	999.9	78.9	46.4	999.9	999.9	78.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	20.0	20.0	99.9	99999	9.99	3400	99999	8
330301	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1100	0.89	3800	99999	2
330301	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3700	0.29	4900	99999	6
330301	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3000	0.30	4700	99999	6
330301	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	5900	0.47	6000	99999	4
330301	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4300	0.34	6000	99999	3
330301	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	5300	0.40	7300	99999	4
330301	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	7600	0.60	10000	99999	8
330401	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1000	0.27	1400	99999	7
330401	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4000	0.67	2010	99999	10
330401	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3900	0.67	3100	99999	18
330401	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3900	0.65	3100	99999	18
330401	999.9	42.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	79.3	40.0	999.9	54.2	50.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3500	0.59	3000	99999	12
330401	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3340	0.56	2010	99999	12
330401	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3340	0.56	3100	99999	14
330401	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3000	0.50	2010	99999	11
330401	999.9	40.1	44.7	999.9	45.2	43.5	999.9	999.9	999.9	999.9	77.1	77.2	999.9	60.5	60.4	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3050	0.51	3100	99999	14
330502	999.9	71.0	67.2	999.9	41.0	57.4	999.9	999.9	999.9	999.9	54.9	56.1	999.9	60.4	64.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.5	99999	9.99	99999	99999	999
330602	999.9	71.0	67.2	999.9	41.0	57.4	999.9	999.9	999.9	999.9	54.9	56.1	999.9	60.4	64.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.5	99999	9.99	99999	99999	999
330702	999.9	71.0	67.2	999.9	41.0	57.4	999.9	999.9	999.9	999.9	54.9	56.1	999.9	60.4	64.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.5	99999	9.99	99999	99999	999
330802	999.9	71.0	67.2	999.9	41.0	57.4	999.9	999.9	999.9	999.9	54.9	56.1	999.9	60.4	64.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.5	99999	9.99	99999	99999	999
330903	999.9	74.5	100.0	999.9	46.2	50.9	999.9	999.9	999.9	999.9	49.2	62.9	999.9	63.0	86.3	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
330903	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
331001	999.9	40.8	50.2	999.9	53.4	40.3	999.9	999.9	999.9	999.9	60.9	60.3	999.9	67.4	72.8	999.9	999.9	999.9	999.9	1.3	0.73	2.0	0.21	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
331001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.3	0.73	2.0	0.21	14.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
331101	999.9	46.1	40.4	999.9	53.2	44.7	999.9	999.9	999.9	999.9	71.9	71.2	999.9	65.6	70.7	999.9	999.9	999.9	999.9	1.0	0.73	2.0	0.21	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
331101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.0	0.73	2.0	0.21	0.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
331201	999.9	48.0	49.3	999.9	47.4	51.1	999.9	999.9	999.9	999.9	74.2	71.2	999.9	69.4	65.8	999.9	999.9	999.9	999.9	1.0	0.73	2.0	0.21	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
331201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.0	0.73	2.0	0.21	14.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
331301	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	1000	99999	8
331401	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	1450	99999	2
331501	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	1100	99999	2
331601	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	1000	99999	2
331701	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	13000	99999	8
331801	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	11500	99999	4
331901	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	11000	99999	2
332001	999.9	31.7	37.0	999.9	44.0	41.0	999.9	999.9	999.9	999.9	75.9	82.4	999.9	72.5	78.8	999.9	999.9	999.9	999.9	1.1	0.49	2.0	0.60	99.9	99.9	99.9	99.9	99.9	99999	9.99	11300	99999	8
332102	999.9	81.4	91.9	999.9	40.5	50.3	999.9	999.9	999.9	999.9	61.1	60.4	999.9	62.7	71.1	999.9	999.9	999.9	999.9	1.2	0.27	1.9	0.07	99.9	99.9	99.9	99.9	9.5	99999	9.99	2400	99999	7
332202	999.9	81.4	91.9	999.9	40.5	50.3	999.9	999.9	999.9	999.9	61.1	60.4	999.9	62.7	71.1	999.9	999.9	999.9	999.9	1.2	0.27	1.9	0.07	99.9	99.9	99.9	99.9	9.5	99999	9.99	2300	99999	6
332302	999.9	81.4	91.9	999.9	40.5	50.3	999.9	999.9	999.9	999.9	61.1	60.4	999.9	62.7	71.1	999.9	999.9	999.9	999.9	1.2	0.27	1.9	0.07	99.9	99.9	99.9	99.9	9.5	99999	9.99	2100	99999	8
332402	999.9	81.4	91.9	999.9	40.5	50.3	999.9	999.9	999.9	999.9	61.1	60.4	999.9	62.7	71.1	999.9	999.9	999.9	999.9	1.2	0.27	1.9	0.07	99.9	99.9	99.9	99.9	9.5	99999	9.99	1800	99999	7

Table III-32

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
332902	3	1	56	0.375	0.50	61	52	43	42	47	61	60	60	60	58	46	44	50	59	0.64	0.88	0.93	0.89	0.88	33	41	40	44	52	99	50% NW 4" or less.
332602	3	1	56	0.375	0.50	55	46	43	45	61	61	55	58	63	47	44	49	55	59	0.64	0.88	0.93	0.89	0.88	30	40	44	49	52	99	-
332702	3	1	56	0.375	0.50	60	61	44	42	50	63	63	60	60	58	49	45	52	58	0.64	0.88	0.93	0.89	0.88	37	44	40	46	51	99	-
332802	3	1	56	0.375	0.50	72	79	40	42	56	63	61	60	58	63	53	48	54	60	0.64	0.88	0.93	0.89	0.88	40	40	43	46	53	99	
332902	4	1	56	0.375	0.50	74	72	43	50	63	59	59	63	66	63	55	52	57	60	0.69	0.79	0.88	0.78	0.89	41	43	34	44	53	99	See table 47.
333002	4	1	56	0.375	0.50	65	76	40	58	70	63	68	69	67	62	60	58	64	64	0.69	0.79	0.88	0.78	0.89	40	47	38	38	57	99	-
333102	4	1	56	0.375	0.50	79	62	43	54	62	60	61	73	74	60	53	53	59	61	0.69	0.79	0.88	0.78	0.89	40	42	38	46	54	99	-
333202	2	1	76	0.375	0.50	6	31	31	26	32	55	58	44	42	23	20	38	38	46	0.79	0.64	0.67	0.67	0.67	17	18	21	25	31	99	No veg.
333302	2	1	76	0.375	0.50	8	36	34	29	39	57	46	39	37	26	33	34	42	47	0.73	0.66	0.62	0.67	0.71	17	22	21	28	33	99	No veg; soil data same as test 332
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	50% NW veg; small willows 2" or less.
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	
333402	2	1	76	0.375	0.50	18	40	40	43	42	56	58	55	58	39	43	44	47	52	0.53	0.72	0.71	0.62	0.53	18	31	31	29	28	99	
333901	1	1	49	0.375	0.50	11	31	31	29	28	28	28	27	40	24	29	25	22	28	0.46	0.68	0.67	0.71	0.79	11	20	17	16	15	0	100% slip due to sinkage; no veg.
333901	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
333901	1	1	49	0.375	0.50	17	22	18	18	23	31	42	44	41	19	19	20	24	32	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
333601	1	1	49	0.375	0.50	12	36	32	26	22	32	33	31	48	27	31	27	23	22	0.01	0.60	0.74	0.65	0.57	18	21	28	15	12	0	-
333601	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
333601	1	1	49	0.375	0.50	10	29	18	18	19	26	43	40	44	21	28	18	21	29	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
333701	2	1	70	0.375	0.50	6	27	29	27	26	40	48	30	35	21	20	27	31	37	0.97	0.60	0.71	0.74	0.70	18	19	19	23	29	99	No veg.
333701	2	1	70	0.375	0.50	6	27	29	27	26	40	48	30	35	21	20	27	31	37	0.97	0.60	0.71	0.74	0.70	18	19	19	23	29	99	
333701	2	1	70	0.375	0.50	6	27	29	27	26	40	48	30	35	21	20	27	31	37	0.97	0.60	0.71	0.74	0.70	18	19	19	23	29	99	
333701	2	1	70	0.375	0.50	6	27	29	27	26	40	48	30	35	21	20	27	31	37	0.97	0.60	0.71	0.74	0.70	18	19	19	23	29	99	
333701	2	1	70	0.375	0.50	6	27	29	27	26	40	48	30	35	21	20	27	31	37	0.97	0.60	0.71	0.74	0.70	18	19	19	23	29	99	
333801	1	1	49	0.375	0.50	2	26	29	21	18	17	18	19	34	19	20	21	18	17	0.81	0.60	0.64	0.50	0.61	11	14	11	11	8	0	100% slip due to sinkage; no veg.
333801	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
333901	1	1	49	0.375	0.50	5	20	27	18	16	16	17	21	31	20	25	20	17	18	0.94	0.62	0.79	0.71	0.64	11	16	16	12	10	0	-
333901	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
334001	1	1	49	0.375	0.50	13	36	32	27	26	22	28	28	24	28	38	26	29	23	0.04	0.73	0.72	0.78	0.60	18	22	20	18	16	0	100% slip due to sinkage; slight tilt to lt: no veg.
334001	1	1	49	0.375	0.50	21	24	28	18	16	17	28	30	33	22	20	17	18	20	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
334101	1	1	49	0.375	0.50	29	40	39	29	34	35	36	58	61	33	33	26	30	32	0.70	0.60	0.74	0.83	0.92	33	33	21	28	29	0	- ; dragging on 6th pass; no veg.
334101	1	1	49	0.375	0.50	18	21	15	23	32	36	36	30	30	18	20	23	31	36	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
334303	1	1	92	0.375	0.50	8	13	18	18	16	18	19	19	16	11	15	17	18	17	0.78	0.74	0.72	0.63	0.84	8	11	18	11	9	0	100% slip due to sinkage; dragging on 2nd pass; tilt to rt; 50% NW veg 2" or less.
334303	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
334403	1	1	92	0.375	0.50	8	4	3	7	11	19	19	21	28	4	8	8	12	16	0.39	9.99	0.33	9.99	0.68	3	9	3	999	10	0	100% slip due to sinkage; slight tilt to lt; 50% NW veg 2" or less.
334403	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
334501	1	1	70	0.375	0.50	1	8	18	18	11	14	30	34	[illegible]	7	13	18	18	18	0.08	0.71	0.74	0.99	0.73	4	7	7	999	9	0	100% slip due to sinkage; SFC wet; no veg; slight tilt to rt.
334501	1	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
334601	1	1	70	0.375	0.50	2	11	8	8	8	9	18	34	27	7	8	8	8	18	0.04	0.60	0.70	0.99	0.84	5	6	6	999	6	0	100% slip due to sinkage; SFC wet; no veg; no tilt.
334601	1	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	
334701	2	1	92	0.375	0.50	13	40	30	33	34	56	40	48	41	31	37	38	41	46	0.00	0.70	0.72	0.69	0.66	19	26	25	28	30	99	

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	VANE CJ	SHEAROGRAPH NUMBER TAN PHI	AU	TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	R	R/W	B	B/R	SLIP PCNT
332902	999.9	31.7	40.1	999.9	44.4	43.5	999.9	999.9	999.9	999.9	64.7	64.4	999.9	73.6	77.9	999.9	999.9	999.9	999.9	3.9	0.12	2.0	0.31	99.9	99.9	99.9	99.9	17.5	99999	9.99	10000	99999	2
332602	999.9	31.7	40.1	999.9	44.4	43.5	999.9	999.9	999.9	999.9	64.7	64.4	999.9	73.6	77.9	999.9	999.9	999.9	999.9	3.9	0.12	2.0	0.31	99.9	99.9	99.9	99.9	17.5	99999	9.99	9800	99999	2
332702	999.9	31.7	40.1	999.9	44.4	43.5	999.9	999.9	999.9	999.9	64.7	64.4	999.9	73.6	77.9	999.9	999.9	999.9	999.9	3.9	0.12	2.0	0.31	99.9	99.9	99.9	99.9	17.5	99999	9.99	8800	99999	2
332802	999.9	31.7	40.1	999.9	44.4	43.5	999.9	999.9	999.9	999.9	64.7	64.4	999.9	73.6	77.9	999.9	999.9	999.9	999.9	3.9	0.12	2.0	0.31	99.9	99.9	99.9	99.9	17.5	99999	9.99	6600	99999	2
332902	999.9	40.0	38.6	999.9	45.6	48.0	999.9	999.9	999.9	999.9	68.7	68.4	999.9	73.9	78.0	999.9	999.9	999.9	999.9	3.9	0.12	1.6	0.45	99.9	99.9	99.9	99.9	10.5	99999	9.99	99999	99999	2
333002	999.9	40.0	38.6	999.9	45.6	48.0	999.9	999.9	999.9	999.9	68.7	68.4	999.9	73.9	78.0	999.9	999.9	999.9	999.9	3.9	0.12	1.6	0.45	99.9	99.9	99.9	99.9	10.5	99999	9.99	99999	99999	2
333102	999.9	40.0	38.6	999.9	45.6	48.0	999.9	999.9	999.9	999.9	68.7	68.4	999.9	73.9	78.0	999.9	999.9	999.9	999.9	3.9	0.12	1.6	0.45	99.9	99.9	99.9	99.9	10.5	99999	9.99	99999	99999	2
333202	999.9	98.3	60.7	999.9	47.3	48.5	999.9	999.9	999.9	999.9	65.4	64.8	999.9	61.0	66.5	999.9	999.9	999.9	999.9	1.0	0.21	1.0	0.10	99.9	99.9	99.9	99.9	6.0	2200	0.17	4800	99999	2
333302	999.9	40.7	40.8	999.9	53.9	58.5	999.9	999.9	999.9	999.9	72.5	71.9	999.9	69.0	72.1	999.9	999.9	999.9	999.9	1.0	0.21	1.0	0.10	99.9	99.9	99.9	99.9	6.0	2700	0.21	4800	99999	2
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	8.0	2100	0.17	3800	99999	5
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	5.0	3400	0.28	4900	99999	13
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	4.0	3890	0.31	9800	99999	21
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	8.0	4200	0.34	6800	99999	30
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	4.0	3700	0.30	5700	99999	40
333402	999.9	98.8	95.9	999.9	56.3	60.2	999.9	999.9	999.9	999.9	64.0	62.7	999.9	65.3	68.1	999.9	999.9	999.9	999.9	3.0	0.12	0.9	0.21	99.9	99.9	99.9	99.9	0.0	3700	0.29	9800	99999	50
333901	999.9	75.3	99.4	999.9	60.4	65.0	999.9	999.9	999.9	999.9	53.1	63.0	999.9	62.2	50.0	999.9	999.9	999.9	999.9	0.3	0.29	99.9	9.99	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
333901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	0.3	0.28	99.9	9.99	8.5	5.5	99.9	99.9	8.0	99999	9.99	99999	99999	999
333901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	0.3	0.29	99.9	9.99	9.0	6.0	99.9	99.9	8.0	99999	9.99	99999	99999	999
333601	999.9	88.0	88.7	999.9	61.1	64.9	999.9	999.9	999.9	999.9	56.4	55.2	999.9	63.9	59.2	999.9	999.9	999.9	999.9	0.3	0.29	99.9	9.99	99.9	99.9	99.9	99.9	0.0	99999	9.99	99999	99999	999
333601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	0.3	0.28	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
333601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	0.3	0.28	99.9	9.99	13.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
333701	999.9	56.0	62.1	999.9	45.3	56.1	999.9	999.9	999.9	999.9	63.0	62.6	999.9	59.1	64.0	999.9	999.9	999.9	999.9	1.3	0.21	1.0	0.12	99.9	99.9	99.9	99.9	0.0	1700	0.14	3400	99999	11
333701	999.9	56.0	62.1	999.9	45.3	56.1	999.9	999.9	999.9	999.9	63.0	62.6	999.9	59.1	64.0	999.9	999.9	999.9	999.9	1.3	0.21	1.0	0.12	99.9	99.9	99.9	99.9	8.0	1900	0.18	3800	99999	18
333701	999.9	56.0	62.1	999.9	45.3	56.1	999.9	999.9	999.9	999.9	63.0	62.6	999.9	59.1	64.0	999.9	999.9	999.9	999.9	1.3	0.21	1.0	0.12	99.9	99.9	99.9	99.9	0.0	2300	0.18	3000	99999	29
333701	999.9	56.0	62.1	999.9	45.3	56.1	999.9	999.9	999.9	999.9	63.0	62.6	999.9	59.1	64.0	999.9	999.9	999.9	999.9	1.3	0.21	1.0	0.12	99.9	99.9	99.9	99.9	0.0	2900	0.20	4000	99999	40
333701	999.9	56.0	62.1	999.9	45.3	56.1	999.9	999.9	999.9	999.9	63.0	62.6	999.9	59.1	64.0	999.9	999.9	999.9	999.9	1.3	0.21	1.0	0.12	99.9	99.9	99.9	99.9	4.0	2400	0.19	3900	99999	65
333801	999.9	99.6	98.9	999.9	43.6	70.5	999.9	999.9	999.9	999.9	65.2	64.1	999.9	61.0	57.0	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
333801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	15.0	8.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
333901	999.9	97.3	96.6	999.9	59.6	73.7	999.9	999.9	999.9	999.9	67.5	68.4	999.9	63.9	94.0	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	99.9	99.9	99.9	99.9	4.0	99999	9.99	99999	99999	999
333901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	9.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334001	999.9	96.3	98.4	999.9	43.6	71.4	999.9	999.9	999.9	999.9	66.3	68.9	999.9	65.5	93.0	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	99.9	99.9	99.9	99.9	11.0	99999	9.99	99999	99999	999
334001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	13.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334101	999.9	97.6	94.9	999.9	56.4	66.3	999.9	999.9	999.9	999.9	66.2	64.7	999.9	69.0	98.5	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	99.9	99.9	99.9	99.9	12.0	99999	9.99	99999	99999	999
334101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	1.7	0.21	0.0	0.14	18.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334303	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.15	9.3	0.23	99.9	99.9	99.9	99.9	2.9	99999	9.99	99999	99999	999
334303	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.18	0.3	0.23	22.0	20.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334403	999.9	185.7	180.6	999.9	102.4	94.6	999.9	999.9	999.9	999.9	37.6	37.4	999.9	46.5	47.0	999.9	999.9	999.9	999.9	66.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
334403	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	13.0	9.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334501	999.9	79.8	88.4	999.9	42.7	51.0	999.9	999.9	999.9	999.9	58.7	49.4	999.9	48.7	49.2	999.9	999.9	999.9	999.9	60.9	9.99	0.3	0.27	99.9	99.0	99.9	99.9	0.0	99999	9.99	99999	99999	999
334501	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	16.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334601	999.9	79.0	88.4	999.9	42.7	51.0	999.9	999.9	999.9	999.9	58.7	49.4	999.9	48.7	49.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
334601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	16.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	2200	0.20	99999	99999	3
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	2400	0.20	99999	99999	16
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	2150	0.26	99999	99999	31
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	2150	0.26	99999	99999	48
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	1700	0.20	99999	99999	65
334701	999.9	91.7	90.1	999.9	57.4	52.5	999.9	999.9	999.9	999.9	69.0	66.3	999.9	64.5	63.0	999.9	999.9	999.9	999.9	2.2	0.07	2.0	0.07	99.9	99.9	99.9	99.9	13.0	2450	0.29	99999	99999	100

Table III-33

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
334001	2	1	92	0.375	0.50	13	37	35	42	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.00	0.09	17	24	23	[illegible]	[illegible]	99	
334031	2	1	92	0.375	0.50	13	37	35	42	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.00	0.39	17	24	23	[illegible]	[illegible]	99	
334031	2	1	92	0.375	0.50	13	37	35	42	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.09	0.09	17	24	23	[illegible]	[illegible]	99	
334001	2	1	92	0.375	0.50	13	37	35	32	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.09	0.39	17	24	23	[illegible]	[illegible]	99	
334031	2	1	92	0.375	0.50	13	37	35	32	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.09	0.09	17	24	23	[illegible]	[illegible]	99	
334031	2	1	92	0.375	0.50	13	37	35	32	39	55	45	999	999	20	35	35			0.08	0.70	0.00	0.00	0.09	17	24	23	[illegible]	[illegible]	99	
334001	1	1	73	0.375	0.50	1	19	18	8	8	9	9	21	26	7	9	9	8	9	0.67	0.76	0.72	0.75	0.70	5	7	6	6	7	0	100% slip due to sinkage; dragging on 2nd pass; SFC wet;
334901	1	1	73	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	no veg.
334901	1	1	73	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
335001	1	1	86	0.375	0.50		9	9	8	9	11	15	30	31	6	9	9	9	12	0.97	0.70	0.60	0.74	0.69	3	7	6	7	10	0	100% slip due to sinkage; dragging on 5th pass; SFC wet;
335001	1	1	86	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	no veg.
335001	1	1	86	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	14	
335131	1	1	73	0.375	0.50		9	9	8	8	18	14	27	27	6	9	8	9	10	0.71	0.60	0.74	0.77	0.81	4	6	6	7	8	0	100% slip due to sinkage; parallel to test 350; tilt
335181	1	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	to rt; SFC wet; no veg; rut shifted.
335201	1	1	70	0.375	0.50	5	14	18	8	13	14	28	20	38	10	11	10	12	10	0.62	0.60	0.60	0.69	0.69	6	7	7	8	11	0	100% slip due to sinkage; slight tilt to lt; no veg.
335231	1	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
335231	1	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	5	
335301	1	1	73	0.375	0.50	2	19	13	18	8	8	9	12	29	11	14	10	9	13	0.68	0.76	0.83	0.83	0.77	7	10	9	7	6	0	" " " " " ; dragging on 3rd pass; no veg.
335301	1	1	73	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
335301	1	1	79	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	
335401	1	1	78	0.375	0.50	2	14	17	18	11	18	18	14	27	[illegible]	16	15	12	10	0.84	0.69	0.65	0.68	0.71	6	11	10	8	7	0	" " " " " " 5th " "
335401	1	1	78	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
335401	1	1	78	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	14	
335502	2	1	92	0.375	0.50	38	59	50	40	42	59	[illegible]	48	42	31	54	40	30	92	0.61	0.76	0.76	0.74	0.72	31	41	37	37	37	99	
335502	2	1	92	0.375	0.50	38	59	56	40	42	59	[illegible]	48	42	31	54	40	30	92	0.61	0.76	0.76	0.74	0.72	31	41	37	37	37	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	30	33	0.08	0.77	0.84	0.70	0.73	15	17	19	23	26	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	30	30	0.08	0.77	0.84	0.70	0.73	15	17	19	23	23	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	[illegible]	33	0.08	0.77	0.84	0.70	0.73	15	17	19	23	23	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	30	33	0.08	0.77	0.84	0.70	0.73	15	17	19	23	25	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	30	33	0.08	0.77	0.84	0.70	0.73	15	17	19	23	26	99	
335602	2	1	92	0.375	0.50	11	24	22	21	27	41	30	34	21	19	22	23	30	33	0.08	0.77	0.84	0.70	0.73	15	17	19	23	26	99	
335701	1	1	92	0.375	0.50	13	31	28	21	20	19	24	21	35	24	26	23	20	20	0.99	0.76	0.64	0.64	0.64	13	19	15	13	13	0	Vehicle dragging on 22nd pass; vehicle made 50 passes
335701	1	1	92	0.375	0.50	13	27	23	18	17	19	19	29	31	21	22	19	23	15	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	with some difficulty; no veg.
335701	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	17	
335701	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	20	
335701	1	1	92	0.375	0.50	18	19	19	12	14	22	28	30	39	13	14	14	6	21	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	51	
335801	1	1	92	0.375	0.50	8	29	15	13	12	13	14	27	27	14	16	13	10	13	0.44	0.61	0.67	0.72	0.77	8	10	9	9	10	0	Dragging on 5th pass; vehicle could barely spin tracks
335801	1	1	92	0.375	0.50	13	13	14	11	12	14	28	30	32	13	13	12	13	17	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	when immob; no veg.
335801	1	1	92	0.375	0.50	9	19	6	9	28	25	31	31	31	9	9	12	10	25	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
335801	1	1	92	0.375	0.50	8	9	9	11	21	29	34	31	32	8	10	14	20	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	16	
335901	1	1	92	0.375	0.50	14	31	25	21	17	18	18	30	31	23	26	21	19	18	0.69	0.67	0.73	0.71	0.69	15	17	15	13	12	0	Dragging on 14th pass; vehicle made 50 passes with some
335901	1	1	92	0.375	0.50	9	21	18	18	17	18	28	29	32	16	18	17	17	13	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	difficulty.
335901	1	1	92	0.375	0.50	19	23	19	13	13	17	28	29	36	20	18	18	14	13	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
335901	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	28	
335901	1	1	92	0.375	0.50	8	18	18	14	14	28	33	39	35	19	12	18	18	24	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	51	
336002	2	1	92	0.375	0.50	13	33	31	30	34	40	40	43	41	20	31	32	31	43	0.09	0.64	0.09	0.67	0.09	18	20	22	25	28	0	
336032	2	1	92	0.375	0.50	13	33	31	30	34	40	40	43	41	20	31	32	31	43	0.09	0.64	0.09	0.67	0.09	18	20	22	25	28	0	
336002	2	1	92	0.375	0.50	13	33	31	30	34	40	40	43	41	20	31	32	31	43	0.09	0.64	0.09	0.67	0.09	18	20	22	25	28	0	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	TAN PHI	BURGER AU	TAN ALPHA	RUT DEPTH LT	RT	RUT WIDTH LT	RT	DEPTH WATER TABLE	D	B/W	B	B/R	SLIP PONT
334001	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	2950	0.35	99999	99999	1
334031	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	4200	0.51	99999	99999	9
334001	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	2900	0.20	99999	99999	34
334061	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	3950	0.47	99999	99999	35
334051	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	3750	0.44	99999	99999	36
334031	999.9	99.0	68.9	999.9	59.2	54.0	999.9	999.9	999.9	999.9	63.2	59.9	999.9	64.4	67.3	999.9	999.9	999.9	999.9	2.2	0.12	2.0	0.12	99.9	99.9	99.9	99.9	13.0	4100	0.49	99999	99999	100
334001	999.9	76.6	78.7	999.9	75.3	87.6	999.9	999.9	999.9	999.9	54.0	55.8	999.9	53.6	52.5	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
334901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
334901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	15.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335061	999.9	85.3	80.0	999.9	91.5	93.7	999.9	999.9	999.9	999.9	46.6	56.1	999.9	45.6	47.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
335061	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335061	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.0	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335161	999.9	80.0	84.6	999.9	47.2	102.7	999.9	999.9	999.9	999.9	48.5	39.5	999.9	50.8	44.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
335161	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335201	999.9	88.1	78.0	999.9	44.0	98.0	999.9	999.9	999.9	999.9	50.8	53.0	999.9	49.1	45.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
335201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	3.0	3.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335261	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	12.0	9.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335301	999.9	97.4	68.0	999.9	90.0	93.0	999.9	999.9	999.9	999.9	67.4	56.4	999.9	41.4	44.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
335301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.5	2.5	99.9	99.9	2.5	99999	9.99	99999	99999	999
335321	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335401	999.9	93.0	64.6	999.9	6.5	7.9	999.9	999.9	999.9	999.9	67.5	61.4	999.9	50.5	37.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
335401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	16.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335502	999.9	94.0	93.0	999.9	53.0	51.9	999.9	999.9	999.9	999.9	67.4	68.7	999.9	70.7	65.0	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	11.5	99999	9.99	99999	99999	999
335502	999.9	41.0	47.4	999.9	48.7	999.9	999.9	999.9	999.9	999.9	73.6	71.7	999.9	72.3	999.9	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	22.0	4250	0.50	99999	99999	93
335602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	22.0	4500	0.53	99999	99999	100
335602	999.9	73.0	99.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	55.3	67.6	999.9	66.5	60.2	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	27.0	875	0.10	99999	99999	7
335602	999.9	73.0	99.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	55.3	67.6	999.9	66.5	60.2	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	22.0	1300	0.12	99999	99999	84
335602	999.9	73.0	99.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	55.3	67.6	999.9	66.5	60.2	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	22.0	1250	0.15	99999	99999	30
335602	999.9	73.0	99.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	55.3	67.6	999.9	66.5	60.2	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	99.9	99.9	99.9	99.9	22.0	975	0.12	99999	99999	30
335602	999.9	73.0	99.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	55.3	67.6	999.9	66.5	60.2	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	99.9	99.9	99.9	99.9	22.0	900	0.11	99999	99999	62
335701	999.9	94.0	99.0	999.9	44.0	77.0	999.9	999.9	999.9	999.9	70.1	61.1	999.9	61.2	52.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	99.9	99.9	99.9	99.9	7.0	1450	0.22	99999	99999	100
335701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	1.5	1.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
335701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	4.5	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	6.5	7.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
335701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	11.0	11.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
335801	999.9	87.0	73.0	999.9	77.0	74.0	999.9	999.9	999.9	999.9	56.6	55.0	999.9	55.4	53.2	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	99.9	99.9	99.9	99.9	1.5	99999	9.99	99999	99999	999
335801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	1.5	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.38	1.0	0.47	10.5	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.39	1.0	0.47	15.0	14.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335901	999.9	81.0	64.0	999.9	73.2	68.2	999.9	999.9	999.9	999.9	62.2	60.4	999.9	55.3	50.0	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	99.9	99.9	99.9	99.9	9.0	99999	9.99	99999	99999	999
335901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	1.5	1.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
335901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	5.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	9.5	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
335901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	11.5	11.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
336002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	99.9	99.9	99.9	99.9	99.9	2900	0.33	99999	99999	7
336002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.0	0.01	99.9	99.9	99.9	99.9	99.9	2300	0.27	99999	99999	19
336032	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	[illegible]	0.29	2.5	0.01	99.9	99.9	99.9	99.9	99.9	2125	0.25	99999	99999	27

Table III-34

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18
330032	2	1	92	0.375	0.50	15	43	48	36	37	49	56	43	42	33	40	30		
330032	2	1	92	0.375	0.50	15	43	48	36	37	49	56	43	42	33	40	30		
330032	2	1	92	0.375	0.50	15	43	48	36	37	49	56	43	42	33	40	30		
330101	1	1	92	0.375	0.50	13	23	18	14	14	15	21	29	36	18	18	15	14	
330101	1	1	92	0.375	0.50	11	16	14	12	13	16	30	32	32		14	13	14	
330101	1	1	92	0.375	0.50	15	11	10	9	15	29	30	36	26	12		11		
330101	1	1	92	0.375	0.50	6	10	11	11	25	20	26	29	33	9	11			27
330201	1	1	92	0.375	0.50	7	19	18	11	11	11	23	27	30	13	14	11	11	19
330201	1	1	92	0.375	0.50	11	10	9	9	11	16	27	26	25	10	9	10	12	18
330201	1	1	92	0.375	0.50	5	7	8	17	24	24	22	23	25	7		10		23
330301	1	1	92	0.375	0.50	3	9	8	8	9	18	20	30	30	7	8	8	9	13
330301	1	1	92	0.375	0.50	6	8				22	20	30	26	7	8	8	13	
330301	1	1	92	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
330402	1	1	50	0.375	0.50	28	43	47	41	38	46	54	47	38	37	44	42	42	46
330402	1	1	50	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
330501	2	1	50	0.375	0.50	26	31	32	30	37	50	51	43	30	30	31	33	30	46
330501	2	1	50	0.375	0.50	23	50	40	30	31	44	44	43	37	40	45	30	30	40
330501	2	1	50	0.375	0.50	24	30	37	28	36	53	41	43	39	33	34	34	39	43
330501	2	1	50	0.375	0.50	23	31	21	24	29	56	41	36	36	26	25	29	35	42
330501	2	1	50	0.375	0.50	21	33	36	32	33	40	51	30	37	31	38	33	37	44
330501	2	1	50	0.375	0.50	25	20	28	26	37	48	42	44	40	27	27	30	37	42
330602	2	1	50	0.375	0.50	29	25	29	33	36	49	53	51	50	26	28	32	40	47
330602	2	1	50	0.375	0.50	10	29	31	29	37	53	46	48	43	26	28	31	38	45
330602	2	1	50	0.375	0.50	10	29	27	26	32	51	46	40	30	25	27	20	36	44
330602	2	1	50	0.375	0.50	22	31	32	35	43	52	50	48	46	28	33	37	43	48
330602	2	1	50	0.375	0.50	18	22	18	19	44	43	48	30	36	19	28	27	35	43
330701	2	1	50	0.375	0.50	83	94	74	40	57	80	80	80	70	77	71	59	61	78
330701	2	1	50	0.375	0.50	94	111	75	79	73	60	90	89	60	80	87	74	72	67
330701	2	1	50	0.375	0.50	95	103	86	64	50	61	69	71	72	81	84	60	61	63
330801	2	1	50	0.375	0.50	99	141	118	132	113	108	93	88	99	104	128	119	118	109
330801	2	1	50	0.375	0.50	98	129	144	150	143	112	83	77	78	118	141	146	139	118
330801	2	1	50	0.375	0.50	81	143	144	142	130	119	114	110	110	116	143	130	130	121
330901	2	1	50	0.375	0.50	74	119	100	92	94	82	74	80	78	99	105	98	89	83
330901	2	1	50	0.375	0.50	75	105	89	87	79	91	98	79	78	98	94	84	84	86
330901	2	1	50	0.375	0.50	66	136	125	104	101	93	74	65	61	109	122	118	99	90
337001	2	1	50	0.375	0.50	120	148	127	117	123	118	99	96	82	132	131	122	117	111
337001	2	1	50	0.375	0.50	109	114	111	109	122	97	99	79	71	111	111	107	103	98
337001	2	1	50	0.375	0.50	117	154	139	126	100	100	99	90	84	137	140	124	114	104
337101	2	1	50	0.375	0.50	96	95	84	72	68	74	65	68	62	78	84	79	71	69
337101	2	1	50	0.375	0.50	72	83	75	72	66	70	74	69	70	77	77	72	70	71
337101	2	1	50	0.375	0.50	46	83	63	64	69	65	66	78	70	71	77	72	66	67
337201	1	1	66	0.375	0.50	2	7	5	6	15	26	29	33	26	5	6	9	16	22
337201	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
337201	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
337301	1	1	66	0.375	0.50	1	7	6	7	13	29	28	34	28	5	7	9	16	23
337301	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
337301	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999
337401	1	1	66	0.375	0.50	3	9	6	8	14	33	38	28	32	6	8	9	18	26

LOC. TEST AND AREA	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
330032	0.57	0.60	9.99	9.99	9.99	19	27	999	999	999	0	
330032	0.57	0.60	9.99	9.99	9.99	19	27	999	999	999	0	
330032	0.60	0.75	9.99	9.99	9.99	20	[illegible]	999	999	999	0	
330101	0.60	0.73	0.60	0.70	0.07	11	13	10	11	15	0	100% slip due to sinkage; dragging on 10th pass; having extreme difficulty on 20th pass; no veg.
330101	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
330101	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
330101	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	33	
330201	0.56	0.64	0.51	0.59	0.00	7	9	6	6	10	0	100% slip due to sinkage; dragging on 4th pass; no veg.
330201	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
330201	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
330301	0.09	0.73	0.09	0.74	0.00	5	6	7	7	8	0	" " " " " ; no veg.
330301	9.99	9.99	9.99	9.99	9.99	5	6	7	7	8	1	
330301	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
330402	0.85	0.76	0.71	0.78	0.80	31	33	30	33	39	0	" " " " " only; 70% NW veg 6" or less.
330402	9.99	9.99	9.99	9.99	9.99	999	959	999	999	999	1	
330501	0.60	0.60	0.60	0.72	0.76	26	21	22	28	35	99	30% NW veg 1' or less.
330501	0.70	0.65	0.74	0.74	0.79	26	29	20	30	30	99	
330501	0.63	0.66	0.71	0.73	0.76	23	22	24	20	33	99	
330501	0.04	0.71	0.77	0.74	0.71	17	18	19	26	30	99	
330501	0.09	0.66	0.71	0.73	0.76	21	23	23	27	33	99	
330501	0.72	0.72	0.73	0.71	0.72	19	19	21	26	30	99	
330602	0.73	0.60	0.71	0.75	0.79	19	19	23	30	3	0	50% NW veg 1' or less.
330602	0.73	0.60	0.71	0.75	0.79	19	19	22	28	36	0	
330602	0.71	0.72	0.74	0.75	0.75	18	19	21	27	33	0	
330602	0.09	0.76	0.78	0.74	0.70	19	23	23	32	34	0	
330602	0.72	0.71	0.72	0.72	0.72	14	14	10	25	31	0	
330701	0.70	0.69	0.74	0.69	0.56	60	43	44	40	40	99	Engine choked down on 40% run; 70% NW veg 2' or less.
330701	0.70	0.69	0.74	0.65	0.56	68	68	99	4	38	99	
330701	0.70	0.69	0.74	0.69	0.56	63	58	51	40	32	99	
330801	0.75	0.71	0.71	0.68	0.64	76	91	84	80	67	99	" " " " " " " " " "
330801	0.75	0.71	0.71	0.68	0.64	82	100	104	92	72	99	
330801	0.75	0.71	0.71	0.58	0.64	87	102	99	88	[illegible]	99	
330901	0.69	0.70	0.74	0.52	0.50	84	74	72	95	42	99	" " " " " " " " " "
330901	0.69	0.70	0.74	0.62	0.50	58	66	62	52	43	99	
330901	0.65	0.70	0.74	0.62	0.50	71	89	81	61	44	99	
337001	0.69	0.62	0.74	0.74	0.79	112	81	91	86	83	99	" " " " " " " " " "
337001	0.69	0.62	0.74	0.74	0.79	94	69	79	6	76	99	
337001	0.69	0.62	0.74	0.74	0.79	116	87	98	84	78	99	
337101	0.04	0.71	0.66	0.61	0.57	66	68	58	42	39	99	" " " " " ; 60% NW veg 3' or less.
337101	0.04	0.71	0.66	0.61	0.57	60	55	40	45	40	99	
337101	0.04	0.71	0.66	0.61	0.57	61	55	40	40	38	99	
337201	0.58	0.72	0.67	0.60	0.78	2	4	6	11	15	0	100% slip due to sinkage; dragging on 1st pass; no veg.
337201	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
337201	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
337301	0.97	0.64	0.75	0.66	0.97	3	4	7	10	13	0	100% slip due to sinkage; dragging on 1st pass; no veg.
337301	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
337301	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
337401	0.04	0.65	0.73	0.67	0.04	4	9	6	12	17	0	100% slip due to sinkage; dragging on 2nd pass; no veg.

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
330032	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330032	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330032	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330101	999.9	78.0	67.0	999.9	75.0	80.0	999.9	999.9	999.9	999.9	57.2	58.9	999.9	55.2	51.0	999.9	999.9	999.9	999.9
330101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330201	999.9	82.0	81.0	999.9	64.0	80.6	999.9	999.9	999.9	999.9	51.0	52.2	999.9	59.4	40.2	999.9	999.9	999.9	999.9
330201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330301	999.9	91.0	86.0	999.9	46.0	89.0	999.9	999.9	999.9	999.9	46.4	51.9	999.9	50.6	44.9	999.9	999.9	999.9	999.9
330301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330402	999.9	49.0	57.0	999.9	56.0	54.0	999.9	999.9	999.9	999.9	71.2	64.1	999.9	67.3	66.0	999.9	999.9	999.9	999.9
330402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
330501	999.9	182.0	90.0	999.9	52.0	5.0	999.9	999.9	999.9	999.9	35.5	60.9	999.9	60.2	60.9	999.9	999.9	999.9	999.9
330501	999.9	182.0	90.0	999.9	52.0	5.0	999.9	999.9	999.9	999.9	35.5	60.9	999.9	60.2	60.9	999.9	999.9	999.9	999.9
330501	999.9	92.1	99.1	999.9	52.0	50.1	999.9	999.9	999.9	999.9	69.7	63.9	999.9	62.1	76.9	999.9	999.9	999.9	999.9
330501	999.9	90.1	99.1	999.9	52.0	50.1	999.9	999.9	999.9	999.9	69.7	63.9	999.9	62.1	76.9	999.9	999.9	999.9	999.9
330501	999.9	96.0	90.4	999.9	54.0	52.3	999.9	999.9	999.9	999.9	64.1	69.9	999.9	62.4	40.2	999.9	999.9	999.9	999.9
330501	999.9	96.0	90.0	999.9	54.0	52.3	999.9	999.9	999.9	999.9	64.1	69.9	999.9	62.4	40.2	999.9	999.9	999.9	999.9
330602	999.9	999.9	90.9	999.9	54.3	46.5	999.9	999.9	999.9	999.9	999.9	60.4	999.9	63.7	54.3	999.9	999.9	999.9	999.9
330602	999.9	999.9	90.9	999.9	54.3	46.5	999.9	999.9	999.9	999.9	999.9	60.4	999.9	63.7	54.3	999.9	999.9	999.9	999.9
330602	999.9	999.9	90.9	999.9	54.3	46.5	999.9	999.9	999.9	999.9	999.9	60.4	999.9	63.7	54.3	999.9	999.9	999.9	999.9
330602	999.9	95.0	94.2	999.9	49.9	43.3	999.9	999.9	999.9	999.9	66.4	66.9	999.9	70.3	74.0	999.9	999.9	999.9	999.9
330602	999.9	95.0	94.2	999.9	49.9	43.3	999.9	999.9	999.9	999.9	66.4	66.9	999.9	70.3	74.0	999.9	999.9	999.9	999.9
330701	999.9	37.0	999.9	999.9	48.5	46.3	999.9	999.9	999.9	999.9	79.2	999.9	999.9	71.5	72.4	999.9	999.9	999.9	999.9
330701	999.9	37.0	999.9	999.9	48.5	46.3	999.9	999.9	999.9	999.9	79.2	999.9	999.9	71.5	72.4	999.9	999.9	999.9	999.9
330701	999.9	37.0	999.9	999.9	44.5	46.3	999.9	999.9	999.9	999.9	79.2	999.9	999.9	71.5	72.4	999.9	999.9	999.9	999.9
330801	999.9	38.1	38.6	999.9	42.5	42.3	999.9	999.9	999.9	999.9	66.0	73.9	999.9	72.6	67.3	999.9	999.9	999.9	999.9
330801	999.9	38.1	38.6	999.9	42.5	47.3	999.9	999.9	999.9	999.9	66.0	73.9	999.9	72.6	67.3	999.9	999.9	999.9	999.9
330801	999.9	38.1	38.6	999.9	42.5	47.3	999.9	999.9	999.9	999.9	66.0	73.9	999.9	72.6	67.3	999.9	999.9	999.9	999.9
330901	999.9	30.3	37.7	999.9	41.6	41.4	999.9	999.9	999.9	999.9	74.3	83.9	999.9	77.6	78.1	999.9	999.9	999.9	999.9
330901	999.9	30.0	37.7	999.9	41.6	41.1	999.9	999.9	999.9	999.9	74.3	83.9	999.9	77.6	78.1	999.9	999.9	999.9	999.9
330901	999.9	30.0	37.7	999.9	41.6	41.1	999.9	999.9	999.9	999.9	74.3	83.9	999.9	77.6	78.1	999.9	999.9	999.9	999.9
337001	999.9	30.7	38.1	999.9	45.4	45.6	999.9	999.9	999.9	999.9	84.9	79.0	999.9	73.0	73.9	999.9	999.9	999.9	999.9
337001	999.9	30.7	38.1	999.9	45.4	45.6	999.9	999.9	999.9	999.9	84.9	79.0	999.9	73.0	73.9	999.9	999.9	999.9	999.9
337001	999.9	30.7	38.1	999.9	45.4	45.6	999.9	999.9	999.9	999.9	84.9	79.0	999.9	73.0	73.9	999.9	999.9	999.9	999.9
337101	999.9	30.0	40.1	999.9	41.1	41.0	999.9	999.9	999.9	999.9	75.3	73.7	999.9	71.0	77.0	999.9	999.9	999.9	999.9
337101	999.9	30.0	40.1	999.9	41.1	41.0	999.9	999.9	999.9	999.9	75.3	73.7	999.9	71.0	77.0	999.9	999.9	999.9	999.9
337101	999.9	30.0	40.1	999.9	41.1	41.0	999.9	999.9	999.9	999.9	75.3	73.7	999.9	71.0	77.0	999.9	999.9	999.9	999.9
337201	999.9	84.7	88.2	999.9	66.0	109.3	999.9	999.9	999.9	999.9	51.0	48.2	999.9	46.0	43.1	999.9	999.9	999.9	999.9
337201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
337201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
337301	999.9	90.0	90.7	999.9	56.6	127.3	999.9	999.9	999.9	999.9	40.2	45.9	999.9	46.0	42.5	999.9	999.9	999.9	999.9
337301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
337301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
337401	999.9	80.6	88.1	999.9	63.4	137.6	999.9	999.9	999.9	999.9	44.3	54.7	999.9	44.6	41.0	999.9	999.9	999.9	999.9

LOC. TEST AND AREA	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/d	B	B/R	SLIP POINT
330032	0.3	0.29	2.0	0.01	99.9	99.9	99.9	99.9	99.9	1750	0.21	99999	99999	42
330032	0.3	0.29	2.0	0.01	99.9	99.9	99.9	99.9	99.9	1729	0.20	99999	99999	66
330032	0.3	0.29	2.0	0.01	99.9	99.9	99.9	99.9	99.9	2020	0.31	99999	99999	29
330101	0.3	0.29	2.0	0.01	99.9	99.9	99.9	99.9	7.5	99999	9.99	99999	99999	999
330101	0.3	0.29	2.0	0.01	1.0	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330101	0.3	0.29	2.0	0.01	0.0	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
330101	0.3	0.29	2.0	0.01	12.0	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330201	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
330201	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330201	99.9	9.99	99.9	9.99	14.0	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330301	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999
330301	99.9	9.99	99.9	9.99	7.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330301	99.9	9.99	99.9	9.99	0.0	6.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330402	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
330402	99.9	9.99	99.9	9.99	0.0	0.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	14.0	3410	0.19	22100	7000	10
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	10.0	1190	0.06	10000	1340	15
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	10.0	1210	0.06	10000	1300	33
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	17.0	1200	0.06	10700	1307	30
330501	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	17.0	800	0.04	17000	99999	97
330602	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	99.9	2000	0.13	17000	9600	0
330602	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	99.9	3010	0.19	29000	99999	24
330602	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	99.9	2010	0.14	10600	6000	37
330602	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	99.9	1900	0.00	19000	4600	42
330602	2.7	0.11	3.0	0.10	99.9	99.9	99.9	99.9	99.9	0	0.00	11900	3900	93
330701	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	[illegible]	4900	0.24	30000	99999	10
330701	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	[illegible]	6790	0.39	39000	99999	20
330701	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	10.0	7000	0.39	41200	99999	20
330801	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3100	0.16	19000	99999	9
330801	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	9740	0.30	24100	99999	17
330801	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	0710	0.49	35100	99999	37
330901	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1310	0.07	7000	1000	0
330901	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3050	0.19	21000	6400	0
330901	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	6700	0.34	33000	10400	13
337001	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	1710	0.09	14000	4300	0
337001	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4000	0.24	30000	0100	3
337001	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	6600	0.34	39000	11200	17
337101	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3550	0.13	20000	6300	0
337101	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	7490	0.30	34000	11900	11
337101	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	0250	0.43	30000	12100	16
337201	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	1.0	99999	9.99	99999	99999	999
337201	99.9	9.99	99.9	9.99	3.5	3.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
337201	99.9	9.99	99.9	9.99	13.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337301	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	1.0	99999	9.99	99999	99999	999
337301	99.9	9.99	99.9	9.99	5.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337301	99.9	9.99	99.9	9.99	10.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337401	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999

Table III-35

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
337401	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
337431	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
337501	1	1	66	0.375	0.50	4	9	8	7	12	33	30	33	34	7	8	9	17	20	0.67	0.70	0.77	0.76	0.74	5	6	7	13	21	0	100% slip due to sinkage; dragging on 4th pass; no veg.
337531	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
337561	1	1	66	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
337602	3	1	90	0.375	0.50	41	37	35	32	31	31	31	40	999	37	35	39	[illegible]	91	[illegible]	0.72	0.72	9.99	[illegible]	34	25	28	999	[illegible]	99	No veg.
337602	3	1	90	0.375	0.50	35	34	31	26	49	39	47	43	47	33	31	39	42	49	0.74	0.60	0.74	9.99	0.72	24	21	26	999	35	99	
337602	3	1	90	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48	0.72	0.76	0.72	9.99	0.73	23	21	25	999	35	99	
337602	3	1	90	0.375	0.50	32	32	29	36	44	49	49	30	48	32	31	35	43	46	0.64	0.60	0.73	9.99	0.74	19	21	26	999	34	99	
337702	3	1	90	0.375	0.50	41	37	39	32	91	51	51	49	999	37	35	39	[illegible]	91	0.92	0.72	0.72	9.99	0.92	34	29	30	999	26	99	No veg; use data from test 376.
337702	3	1	90	0.375	0.50	35	34	31	26	49	39	47	43	47	33	31	39	42	40	0.74	0.60	0.74	9.99	0.72	24	22	26	999	35	99	
337702	3	1	90	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	0.72	0.76	0.72	9.99	0.73	30	32	31	999	39	99	
337702	3	1	90	0.375	0.50	32	32	29	36	44	40	40	30	40	32	31	30	43	46	0.64	0.69	0.73	9.99	0.74	19	21	26	999	34	99	
337802	2	1	90	0.375	0.50	28	30	44	36	38	[illegible]	47	31	92	41	44	47	45	50	0.72	0.60	0.60	0.71	0.79	30	29	31	34	30	0	No veg.
337802	2	1	90	0.375	0.50	31	33	44	40	32	48	35	46	51	39	46	46	[illegible]	50	0.72	0.60	0.63	0.71	0.79	30	30	31	33	38	9	
337802	2	1	90	0.375	0.50	26	93	44	30	40	[illegible]	90	92	93	39	40	40	49	93	0.72	0.60	0.60	0.71	0.79	36	29	29	34	40	0	
337902	2	1	90	0.375	0.50	20	37	45	36	91	61	91	40	90	43	40	44	49	84	1.00	0.70	0.60	0.75	0.80	43	30	30	37	44	0	No veg.
337902	2	1	90	0.375	0.50	21	64	54	36	46		51	50	47	44	51	45	46	91	1.00	0.70	0.60	0.75	0.80	46	40	31	34	42	0	
337902	2	1	90	0.375	0.50	27	93	47	40	92	93	40	46	42	42	47	40	49	92	1.00	0.70	0.60	0.75	0.80	42	37	31	37	43	0	
338002	2	1	90	0.375	0.50	37	63	54	43	45	90	97	99	96	91	98	47	49	54	1.00	0.60	0.66	0.70	0.91	91	34	31	30	49	0	No veg.
338002	2	1	90	0.375	0.50	26	50	49	41	54	63	60	90	90	44	49	40	93	61	1.00	0.60	0.66	0.70	0.91	44	32	32	41	56	0	
338002	2	1	90	0.375	0.50	23	66	40	38	39	61	49	95	91	44	91	40	46	50	1.00	0.69	0.66	0.70	0.91	46	33	30	34	46	0	
338102	2	1	90	0.375	0.50	31	31	22	23	32	44	41	44	30	30	29	20	33	39	0.99	0.99	0.67	0.63	0.60	10	17	17	21	23	99	No veg.
338102	2	1	90	0.375	0.50	19	10	21	29	29	37	37	40	49	19	21	29	30	34	0.60	0.70	0.67	0.63	0.60	13	19	17	19	20	99	
338102	2	1	90	0.375	0.50	21	30	27	27	30	47	40	30	37	20	20	30	37	42	0.66	0.2	0.67	0.63	0.99	17	20	20	23	25	99	
338102	2	1	90	0.375	0.50	21	31	30	31	42	42	37	42	42	27	31	34	38	40	0.60	0.73	0.60	0.63	0.90	10	23	23	24	23	99	
338102	2	1	90	0.375	0.50	20	24	29	30	46	40	43	44	42	29	29	34	37	43	0.93	0.79	0.60	0.62	0.97	16	20	22	24	24	99	
338102	2	1	90	0.375	0.50	23	20	24	20	91	51	43	42	43	29	27	34	43	43	0.92	0.70	0.60	0.62	0.96	10	20	23	27	27	99	
338102	2	1	90	0.375	0.50	24	29	20	30	34	40	44	49	46	27	29	31	36	41	0.92	0.70	0.60	0.62	0.96	17	22	21	22	23	99	
338202	2	1	90	0.375	0.50	66	93	43	40	43	90	96	90	94	54	45	42	47	53	0.64	0.77	0.67	0.63	0.60	45	30	28	30	32	99	No veg.
338202	2	1	90	0.375	0.50	62	46	40	40	41	94	90	90	97	50	43	41	45	49	0.64	0.77	0.67	9.99	0.60	40	33	27	30	29	99	
338302	2	1	90	0.375	0.50	43	43	30	30	40	90	99	90	97	42	30	30	45	91	0.64	0.70	0.67	0.69	0.64	27	20	20	30	33	99	No veg; parallel to test 381.
338302	2	1	90	0.375	0.50	40	42	39	30	41	93	90	92	96	43	39	38	43	90	0.79	0.60	0.72	0.64	0.70	34	31	27	28	20	99	
338302	2	1	90	0.375	0.50	50	41	33	31	30	91	93	47	93	41	30	33	30	46	0.77	0.70	0.72	0.64	0.59	32	27	24	26	27	99	
338302	2	1	90	0.375	0.50	43	44	40	33	36	91	90	40	49	40	30	30	40	48	0.74	0.70	0.74	0.60	0.62	31	29	27	27	30	99	
338302	2	1	90	0.375	0.50	40	40	36	32	36	91	90	90	95	44	39	35	40	48	0.71	0.70	0.79	0.70	0.60	31	28	20	28	32	99	
338302	2	1	90	0.375	0.50	41	44	39	36	30	97	97	47	91	41	41	30	44	51	0.60	0.69	0.70	0.73	0.70	28	20	29	32	36	99	
338401	1	1	70	0.375	0.50	1	4	9	8	8	11	20	30	31	4	9	7	8	16	0.92	0.70	0.64	0.63	0.60	2	4	4	9	10	0	100% slip due to sinkage; slight tilt to lt; no veg.
338501	1	1	70	0.375	0.50	1	2	8	9	6	16	29	33	31	4	8	9	9	17	0.70	0.71	0.63	0.97	0.60	3	4	3	5	8	0	" " " " " " " " " " "
338602	2	1	90	0.375	0.50	26	37	44	33	36	40	41	39	39	35	38	38	39	42	0.66	0.60	0.60	0.61	0.93	23	25	26	23	23	99	Constant 40% slip going toward the water's edge; 30-40% SW veg 4" or less.
338602	2	1	90	0.375	0.50	24	37	44	33	30	40	41	30	39	38	38	38	39	42	0.60	0.60	0.60	0.60	0.93	23	29	26	23	23	99	
338602	2	1	90	0.375	0.50	24	37	44	33	36	40	41	30	39	38	38	38	37	42	0.66	0.60	0.60	0.60	0.93	23	29	26	23	23	99	
338602	2	1	90	0.375	0.50	17	39	40	30	30	47	42	40	39	32	39	37	30	30	0.60	0.60	0.70	0.61	0.93	21	29	26	23	21	99	
338602	2	1	90	0.375	0.50	17	39	40	30	30	47	40	40	39	32	30	37	30	30	0.66	0.60	0.73	0.61	0.93	21	29	26	23	21	99	
338602	2	1	90	0.375	0.50	13	38	36	33	42	40	43	31	42	30	30	31	32	40	0.64	0.64	0.69	0.61	0.90	18	20	21	23	24	99	
338602	2	1	90	0.375	0.50	13	30	20	23	42	40	43	41	42	34	30	31	30	40	0.64	0.71	0.60	0.61	0.90	19	20	21	23	24	99	
338702	2	1	90	0.375	0.50	20	43	30	31	30	34	40	40	37	30	30	30	41	46	0.64	0.71	0.69	0.61	0.30	20	22	24	20	24	99	Parallel to test 385; constant 20% pull.
338702	2	1	90	0.375	0.50	30	37	20	26	93	41	41	37	39	30	31	30	40	48	0.64	0.71	0.69	0.61	0.38	20	28	25	24	24	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-15	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN φ1	RUBBER AJ	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	B/B	SLIP PCNT
337401	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337431	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	19.0	12.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337501	999.9	70.0	88.9	999.0	89.0	95.5	999.9	999.9	999.9	999.9	71.9	58.6	999.9	47.4	49.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
337531	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337561	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.0	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
337602	999.9	[illegible]	[illegible]	999.0	50.1	45.7	999.9	999.9	999.9	999.9	64.4	62.8	999.9	65.0	66.3	999.9	999.9	999.9	999.9	1.0	0.47	2.7	0.40	5.5	5.5	12.5	12.5	27.0	99999	9.99	14000	99999	0
337602	999.9	46.7	[illegible]	999.0	46.7	49.3	999.9	999.9	999.9	999.9	73.1	67.8	999.9	71.3	56.4	999.9	999.9	999.9	999.9	1.0	0.47	2.7	0.40	5.0	5.0	13.0	13.0	27.0	99999	9.99	13000	99999	0
337602	999.9	48.0	[illegible]	999.0	48.6	49.4	999.9	999.9	999.9	999.9	71.8	65.5	999.9	71.2	71.1	999.9	999.9	999.9	999.9	1.0	0.47	2.7	0.40	99.9	99.9	99.9	99.9	27.0	99999	9.99	12000	99999	0
337602	999.9	44.4	[illegible]	999.0	50.0	50.1	999.9	999.9	999.9	999.9	72.4	67.2	999.9	71.2	60.6	999.9	999.9	999.9	999.9	1.0	0.47	2.7	0.40	7.5	7.5	12.5	12.5	27.0	99999	9.99	12000	99999	0
337702	999.9	[illegible]	[illegible]	999.0	50.1	45.7	999.9	999.9	999.9	999.9	64.4	62.8	999.9	65.0	66.3	999.9	999.9	999.9	999.9	2.1	0.58	2.6	0.73	2.5	2.5	13.0	13.0	20.0	99999	9.99	8000	99999	0
337702	999.9	46.7	[illegible]	999.0	46.7	49.3	999.9	999.9	999.9	999.9	71.3	67.8	999.9	71.3	56.4	999.9	999.9	999.9	999.9	2.1	0.59	2.6	0.73	2.0	2.0	12.5	12.5	20.0	99999	9.99	8000	99999	0
337702	999.9	48.0	[illegible]	999.0	48.6	49.4	999.9	999.9	999.9	999.9	71.8	65.5	999.9	71.2	71.1	999.9	999.9	999.9	999.9	2.1	0.59	2.6	0.73	2.5	2.5	12.0	12.0	20.0	99999	9.99	6000	99999	0
337702	999.9	44.4	[illegible]	999.0	50.0	50.1	999.9	999.9	999.9	999.9	72.4	67.2	999.9	71.2	60.6	999.9	999.9	999.9	999.9	2.1	0.58	2.6	0.73	2.5	2.5	11.0	11.0	20.0	99999	9.99	5600	99999	0
337802	999.9	[illegible]	44.0	999.0	45.6	44.8	999.9	999.9	999.9	999.9	67.0	70.0	999.9	73.9	65.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	37.0	9800	0.30	23000	99999	0
337802	999.9	[illegible]	44.0	999.0	45.6	44.8	999.9	999.9	999.9	999.9	67.0	70.0	999.9	73.9	65.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	8100	0.42	31000	18000	18
337802	999.9	[illegible]	44.0	999.0	45.6	44.8	999.9	999.9	999.9	999.9	67.0	70.0	999.9	73.9	65.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	9600	0.49	37000	99999	20
337902	999.9	[illegible]	43.3	999.0	48.9	43.0	999.9	999.9	999.9	999.9	79.6	74.7	999.9	43.7	75.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	37.0	6000	0.31	24000	99999	0
337902	999.9	[illegible]	43.3	999.0	48.9	43.0	999.9	999.9	999.9	999.9	79.6	74.7	999.9	43.7	75.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	8310	0.43	32000	99999	18
337902	999.9	[illegible]	43.3	999.0	48.9	43.0	999.9	999.9	999.9	999.9	79.6	74.7	999.9	43.7	75.0	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	9500	0.49	37000	99999	16
338002	999.9	[illegible]	40.0	999.0	112.0	45.9	999.9	999.9	999.9	999.9	70.0	66.9	999.9	40.2	74.9	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	37.0	5300	0.27	21100	99999	0
338002	999.9	[illegible]	40.0	999.0	112.0	45.9	999.9	999.9	999.9	999.9	70.0	66.9	999.9	40.2	74.9	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	8400	0.43	32300	99999	18
338002	999.9	[illegible]	40.0	999.0	112.0	45.9	999.9	999.9	999.9	999.9	70.0	66.9	999.9	40.2	74.9	999.9	999.9	999.9	999.9	9.0	0.13	0.0	1.07	99.9	99.9	99.9	99.9	99.9	9600	0.49	37800	99999	21
338102	999.9	91.0	40.4	999.0	49.7	52.4	999.9	999.9	999.9	999.9	67.2	70.9	999.9	70.6	67.0	999.9	999.9	999.9	999.9	5.0	0.34	2.1	0.40	99.9	99.9	99.9	99.9	16.5	4250	0.22	24000	99999	40
338102	999.9	91.0	40.4	999.0	49.7	52.4	999.9	999.9	999.9	999.9	67.2	70.9	999.9	70.6	67.0	999.9	999.9	999.9	999.9	5.0	0.38	2.1	0.40	99.9	99.9	99.9	99.9	16.5	99999	9.99	9000	99999	0
338102	999.9	91.0	40.4	999.0	49.7	52.4	999.9	999.9	999.9	999.9	67.2	70.9	999.9	70.6	67.0	999.9	999.9	999.9	999.9	5.0	0.34	2.1	0.40	99.9	99.9	99.9	99.9	16.5	2000	0.15	19000	99999	4
338102	999.9	[illegible]	[illegible]	999.0	56.2	47.5	999.9	999.9	999.9	999.9	67.1	67.0	999.9	60.2	60.4	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	16.5	2300	0.12	18000	99999	12
338102	999.9	[illegible]	[illegible]	999.0	56.2	47.5	999.9	999.9	999.9	999.9	67.1	67.0	999.9	60.2	60.4	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	16.5	3500	0.18	21000	99999	11
338102	999.9	[illegible]	[illegible]	999.0	56.2	47.5	999.9	999.9	999.9	999.9	67.1	67.0	999.9	60.2	60.4	999.9	999.9	999.9	999.9	5.0	0.34	2.1	0.40	99.9	99.9	99.9	99.9	16.5	4300	0.23	27000	99999	44
338102	999.9	[illegible]	[illegible]	999.0	56.2	47.5	999.9	999.9	999.9	999.9	67.1	67.0	999.9	60.2	60.4	999.9	999.9	999.9	999.9	5.0	0.34	2.1	0.40	99.9	99.9	99.9	99.9	16.5	3700	0.19	20000	99999	100
338202	999.9	94.2	40.9	999.0	52.6	42.0	999.9	999.9	999.9	999.9	70.0	72.2	999.9	67.9	77.2	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	24.0	6920	0.36	20000	99999	9
338202	999.9	94.2	40.9	999.0	52.6	42.0	999.9	999.9	999.9	999.9	70.0	72.2	999.9	67.9	77.2	999.9	999.9	999.9	999.9	5.0	0.38	2.1	0.40	99.9	99.9	99.9	99.9	24.0	9000	0.46	3800	99999	18
338302	999.9	99.6	99.9	999.0	48.7	40.3	999.9	999.9	999.9	999.9	63.0	64.5	999.9	63.4	73.0	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	17.0	5300	0.27	26000	99999	36
338302	999.9	91.0	40.0	999.0	49.5	49.3	999.9	999.9	999.9	999.9	60.9	70.9	999.9	60.7	72.3	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	17.0	3700	0.19	18000	99999	8
338302	999.9	91.0	40.0	999.0	49.5	49.3	999.9	999.9	999.9	999.9	60.9	70.9	999.9	60.7	72.3	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	17.0	5600	0.29	26000	99999	6
338302	999.9	91.0	40.0	999.0	49.5	49.3	999.9	999.9	999.9	999.9	60.9	70.9	999.9	60.7	72.3	999.9	999.9	999.9	999.9	5.0	0.38	2.1	0.40	99.9	99.9	99.9	99.9	17.0	5100	0.27	29000	99999	17
338302	999.9	91.0	40.0	999.0	49.5	49.3	999.9	999.9	999.9	999.9	60.9	70.9	999.9	60.7	72.3	999.9	999.9	999.9	999.9	5.0	0.38	2.1	0.40	99.9	99.9	99.9	99.9	17.0	5300	0.27	21000	99999	100
338302	999.9	91.0	40.0	999.0	49.5	49.3	999.9	999.9	999.9	999.9	60.9	70.9	999.9	60.7	72.3	999.9	999.9	999.9	999.9	5.0	0.39	2.1	0.40	99.9	99.9	99.9	99.9	17.0	5300	0.27	21000	99999	100
338401	999.9	88.0	102.3	999.0	99.0	999.9	999.9	999.9	999.9	999.9	59.3	42.0	999.9	42.1	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	1.0	99999	9.99	99999	99999	999
338501	999.9	98.0	106.9	999.0	46.0	72.5	999.9	999.9	999.9	999.9	45.0	40.6	999.9	62.4	57.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	1.0	99999	9.99	99999	99999	999
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	2000	0.14	13000	99999	21
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	2350	0.12	18000	99999	40
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.49	99.9	99.9	99.9	99.9	15.5	1400	0.07	10000	99999	30
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	600	0.03	10000	99999	97
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.49	99.9	99.9	99.9	99.9	15.5	350	0.02	10000	99999	48
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	120	0.01	9800	99999	74
338602	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.49	99.9	99.9	99.9	99.9	15.5	100	0.01	10000	99999	100
338702	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	990	0.05	11000	99999	34
338702	999.9	999.0	999.9	999.0	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	410	0.02	11000	99999	[illegible]

Table III-36

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	3	6	9	12	15	18	21	24	CI AVG 0-6	3-9	6-12	9-15	12-18	RI 0-6	3-9	6-12	9-15	12-18	RCI 0-6	3-9	6-12	9-15	12-18	PASS NO.	REMARKS
330702	2	1	58	0.375	0.50	18	35	32	27	37	44	43	41	31	28	31	32	36	41	0.64	0.71	0.69	0.61	0.53	18	22	22	22	22	99	
330702	2	1	58	0.375	0.50	15	42	32	26	47	41	46	34	39	30	33	35	38	40	0.64	0.71	0.69	0.61	0.53	19	23	24	23	24	99	
330702	2	1	58	0.375	0.50	17	38	34	33	40	44	41	31	42	30	38	36	39	42	0.64	0.71	0.69	0.61	0.53	19	25	25	24	22	99	
330801	3	1	49	0.375	0.50	17	23	23	29	41	36	36	38	37	21	25	31	35	38	0.74	0.67	0.66	0.64	0.62	18	17	20	22	24	99	Test lane had two soil strengths; two tests were conducted therefore. Had no difficulty in turns; 40% NW veg 4" or less.
330801	3	1	49	0.375	0.50	17	22	29	27	48	44	48	36	37	21	28	31	37	43	0.74	0.67	0.66	0.64	0.62	18	17	20	24	27	99	
330801	3	1	49	0.375	0.50	13	25	25	26	38	45	36	34	33	21	28	30	36	40	0.74	0.67	0.66	0.64	0.62	18	17	20	23	25	99	
330801	3	1	49	0.375	0.50	21	23	22	29	41	43	37	37	34	22	23	29	30	40	0.74	0.67	0.66	0.64	0.62	18	15	19	23	25	99	
330902	3	1	49	0.375	0.50	23	32	30	31	46	47	44	34	40	20	31	32	41	46	0.78	0.63	0.73	0.66	0.50	20	19	23	27	27	0	This test is part of previous turning test. Vehicle had hard time going on 25 & 50' radius, immob on 75' radius retrieved & then made str run with muddy wheels; 40% NW veg 4" or less.
330902	3	1	49	0.375	0.50	18	28	29	29	41	38	36	38	34	25	29	33	36	38	0.71	0.60	0.59	0.58	0.50	18	20	19	21	22	0	
330902	3	1	49	0.375	0.50	14	27	28	37	44	40	44	39	33	23	31	38	40	43	0.78	0.53	0.64	0.62	0.60	18	16	23	29	30	0	
330902	3	1	49	0.375	0.50	28	28	27	28	40	36	41	41	35	29	28	32	35	39	0.78	0.53	0.68	0.64	0.60	18	15	22	22	23	0	
339002	2	1	49	0.375	0.50	34	43	43	34	42	56	51	63	56	40	40	40	44	50	0.94	0.70	0.64	0.63	0.99	38	20	26	36	40	99	40% constant slip; 20% NW veg 2" or less.
339002	2	1	49	0.375	0.50	41	51	48	39	44	61	46	53	51	44	43	41	48	50	0.90	0.72	0.64	0.77	0.84	48	31	26	37	42	99	
339002	2	1	49	0.375	0.50	37	41	37	30	45	64	51	58	56	38	39	40	49	53	0.84	0.75	0.64	0.72	0.73	38	29	26	39	39	99	
339002	2	1	49	0.375	0.50	36	34	37	36	33	57	51	49	49	36	36	39	42	47	0.78	0.77	0.64	0.66	0.62	28	28	22	28	29	99	
339002	2	1	49	0.375	0.50	28	35	28	33	31	58	56	48	46	30	32	31	39	46	0.72	0.77	0.64	0.61	0.58	22	25	20	24	24	99	
339002	2	1	49	0.375	0.50	16	23	25	31	32	46	44	40	39	21	26	29	36	41	0.60	0.72	0.64	0.63	0.50	14	19	19	23	24	99	
339002	2	1	49	0.375	0.50	19	34	38	28	38	53	49	47	52	28	31	29	37	44	0.69	0.68	0.64	0.64	0.68	18	21	19	24	28	99	
339002	2	1	49	0.375	0.50	9	19	27	23	38	45	36	41	46	18	23	29	31	36	0.62	0.64	0.64	0.66	0.69	11	15	18	20	25	99	
339102	2	1	49	0.375	0.50	34	43	43	34	42	56	51	63	56	40	40	40	44	50	0.94	0.70	0.64	0.63	0.99	38	20	26	36	40	99	2% constant slip; parallel to test 390; same soil data used; 20% NW veg 2" or less.
339102	2	1	49	0.375	0.50	41	51	48	39	44	61	46	53	51	44	43	41	48	50	0.90	0.72	0.64	0.77	0.84	48	31	26	37	42	99	
339102	2	1	49	0.375	0.50	37	41	37	30	45	64	51	58	56	38	39	40	49	53	0.84	0.75	0.64	0.72	0.73	38	29	26	39	39	99	
339102	2	1	49	0.375	0.50	36	34	37	36	33	57	51	49	49	36	36	39	42	47	0.78	0.77	0.64	0.66	0.62	28	28	22	28	29	99	
339102	2	1	49	0.375	0.50	28	35	28	33	31	58	56	48	46	30	32	31	39	46	0.72	0.77	0.64	0.61	0.58	22	29	20	24	24	99	
339102	2	1	49	0.375	0.50	16	23	25	31	32	46	44	40	39	21	26	29	36	41	0.60	0.72	0.64	0.63	0.50	14	19	18	23	26	99	
339102	2	1	49	0.375	0.50	19	34	38	28	38	53	49	47	52	28	31	29	37	44	0.69	0.68	0.64	0.64	0.68	18	21	19	24	28	99	
339102	2	1	49	0.375	0.50	9	19	27	28	36	45	30	41	46	18	25	27	33	36	0.62	0.64	0.64	0.66	0.69	11	16	17	22	25	99	
339202	2	1	49	0.375	0.50	36	38	38	47	51	58	46	46	47	38	40	44	50	58	0.88	0.88	0.70	0.63	0.50	38	38	30	38	28	99	Turn tests made with no difficulty.
339202	2	1	49	0.375	0.50	36	37	36	36	46	56	50	49	47	36	38	38	47	85	0.88	0.88	0.70	0.63	0.53	38	26	32	36	26	99	
339202	2	1	49	0.375	0.50	38	37	44	38	48	58	51	51	54	38	38	48	47	82	0.88	0.88	0.70	0.63	0.58	38	30	32	38	26	99	
339202	2	1	49	0.375	0.50	38	38	38	41	47	54	48	44	43	38	38	38	47	88	0.88	0.88	0.70	0.63	0.58	38	31	32	38	26	99	
339302	2	1	70	0.375	0.50	48	38	38	41	47	54	48	58	56	33	39	38	44	51	0.66	0.60	0.60	0.64	0.63	22	19	22	28	32	99	40% constant slip; 20% NW veg 2" or less.
339302	2	1	70	0.375	0.50	38	38	38	38	38	41	37	44	46	34	38	38	38	41	0.66	0.60	0.71	0.69	0.63	22	21	22	24	28	99	
339302	2	1	70	0.375	0.50	38	32	32	30	37	37	37	40	48	34	34	32	32	35	0.66	0.73	0.71	0.69	0.60	22	22	22	24	26	99	
339302	2	1	70	0.375	0.50	36	44	37	36	36	37	42	42	48	34	33	33	38	38	0.66	0.79	0.70	0.67	0.60	22	26	28	22	22	99	
339302	2	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339302	2	1	70	0.375	0.50	18	28	38	38	38	38	38	38	43	28	38	38	38	37	0.62	0.60	0.60	0.69	0.60	18	18	18	18	22	99	
339302	2	1	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339302	2	1	70	0.375	0.50	8	19	24	30	28	37	30	30	43	20	26	20	31	38	0.60	0.60	0.62	0.60	0.60	18	12	18	18	24	99	
339302	2	1	70	0.375	0.50	8	10	21	28	30	32	37	30	44	20	21	21	31	30	0.68	0.67	0.68	0.60	0.71	11	11	13	19	21	99	
339302	2	1	70	0.375	0.50	8	11	23	26	30	38	37	38	44	17	23	28	27	30	0.66	0.67	0.68	0.66	0.71	11	12	14	18	21	99	
339302	2	1	70	0.375	0.50	9	14	19	28	30	33	41	34	38	13	18	28	25	31	0.77	0.60	0.67	0.69	0.71	7	10	13	17	22	99	
339402	2	1	70	0.375	0.50	48	38	38	31	38	61	38	34	56	33	39	38	44	51	0.66	0.60	0.60	0.64	0.63	22	19	22	28	32	99	20% constant slip; parallel to test 393
339402	2	1	70	0.375	0.50	38	33	38	38	34	44	44	48	46	34	38	33	38	41	0.66	0.64	0.64	9.99	9.99	22	21	22	999	999	99	
339402	2	1	70	0.375	0.50	36	33	38	30	27	41	37	48	46	34	31	29	32	35	0.66	0.71	0.71	9.99	9.99	22	22	28	999	999	99	
339402	2	1	70	0.375	0.50	36	40	37	31	38	37	46	37	48	34	36	38	33	38	0.60	0.73	0.70	0.67	0.50	22	26	28	22	22	99	
339402	2	1	70	0.375	0.50	10	29	38	34	25	39	58	38	43	28	28	28	30	37	0.62	0.60	0.69	0.65	0.60	18	18	18	18	22	99	
339402	2	1	70	0.375	0.50	8	19	21	21	27	44	42	38	44	18	20	28	31	38	0.69	0.68	0.62	0.63	0.64	11	12	14	28	24	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CJ	VANE TAN PHI	RUBBER AJ	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/W	S	S/R	SLIP PCNT
330702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	100	0.01	9200	99999	31
330702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	100	0.01	10000	99999	40
330702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	3.0	0.47	3.0	0.40	99.9	99.9	99.9	99.9	15.5	100	0.01	8100	99999	140
330801	999.9	60.0	60.1	999.9	50.5	54.0	999.9	999.9	999.9	999.9	57.5	54.9	999.9	70.0	63.3	999.9	999.9	999.9	999.9	3.3	0.19	0.2	0.27	1.5	1.5	11.0	11.0	7.0	99999	9.99	2317	99999	7
330801	999.9	60.0	60.1	999.9	50.5	54.0	999.9	999.9	999.9	999.9	57.5	54.9	999.9	70.0	63.3	999.9	999.9	999.9	999.9	3.3	0.19	0.2	0.27	2.0	2.0	11.0	11.0	7.0	99999	9.99	2100	99999	8
330801	999.9	60.0	60.1	999.9	50.5	54.0	999.9	999.9	999.9	999.9	57.5	54.9	999.9	70.0	63.3	999.9	999.9	999.9	999.9	3.3	0.19	0.2	0.27	3.0	3.0	14.0	14.0	7.0	99999	9.99	1003	99999	8
330801	999.9	60.0	60.1	999.9	50.5	54.0	999.9	999.9	999.9	999.9	57.5	54.9	999.9	70.0	63.3	999.9	999.9	999.9	999.9	3.3	0.18	0.2	0.27	2.0	2.0	12.0	12.0	7.0	99999	9.99	2400	99999	2
330902	999.9	51.7	50.0	999.9	53.6	50.2	999.9	999.9	999.9	999.9	63.2	63.7	999.9	64.4	67.2	999.9	999.9	999.9	999.9	4.0	0.27	1.1	0.36	2.5	2.5	12.0	12.0	5.0	99999	9.99	2200	99999	999
330902	999.9	51.7	50.0	999.9	53.6	50.2	999.9	999.9	999.9	999.9	63.2	63.7	999.9	64.4	67.2	999.9	999.9	999.9	999.9	4.0	0.27	1.1	0.36	7.5	7.5	12.0	12.0	5.0	99999	9.99	2271	99999	999
330902	999.9	60.6	60.2	999.9	40.9	49.9	999.9	999.9	999.9	999.9	65.2	62.9	999.9	57.0	70.2	999.9	999.9	999.9	999.9	4.0	0.27	1.1	0.36	9.0	9.0	13.0	13.0	5.0	99999	9.99	2300	99999	999
330902	999.9	60.6	60.2	999.9	40.9	49.9	999.9	999.9	999.9	999.9	65.2	62.9	999.9	57.0	70.2	999.9	999.9	999.9	999.9	4.0	0.27	1.1	0.36	6.5	6.5	12.5	12.5	5.0	99999	9.99	2200	99999	999
339002	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3400	0.40	99999	99999	22
339002	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.9	0.51	2.0	0.36	99.9	99.9	99.9	99.9	9.0	3020	0.50	99999	99999	22
339002	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.9	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3610	0.50	10000	99999	20
339002	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.9	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3490	0.40	10000	99999	20
339002	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	7.0	3100	0.44	11000	99999	20
339002	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	3.9	0.51	2.0	0.36	99.9	99.9	99.9	99.9	7.0	2220	0.21	6400	99999	27
339002	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	4.0	0.31	1.6	0.05	99.9	99.9	99.9	99.9	7.0	1090	0.15	6000	99999	23
339002	999.9	50.6	51.1	999.9	59.6	54.3	999.9	999.9	999.9	999.9	63.4	60.2	999.9	64.4	67.6	999.9	999.9	999.9	999.9	4.0	0.31	1.6	0.05	99.9	99.9	99.9	99.9	9.5	1150	0.16	6000	99999	20
339102	999.9	50.0	51.1	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	9.0	3970	0.40	11000	99999	22
339102	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3610	0.50	12000	99999	22
339102	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3690	0.51	12000	99999	23
339102	999.9	46.0	56.0	999.9	52.6	46.9	999.9	999.9	999.9	999.9	69.0	67.3	999.9	65.7	71.2	999.9	999.9	999.9	999.9	3.8	0.51	2.0	0.36	99.9	99.9	99.9	99.9	8.0	3490	0.40	12000	99999	24
339102	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	3.0	0.51	2.0	0.36	99.9	99.9	99.9	99.9	7.0	2990	0.41	11000	99999	20
339102	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	3.0	0.51	2.0	0.36	99.9	99.9	99.9	99.9	7.0	1920	0.21	7000	99999	20
339102	999.9	47.0	50.9	999.9	65.3	49.1	999.9	999.9	999.9	999.9	72.1	62.2	999.9	50.9	70.0	999.9	999.9	999.9	999.9	4.0	0.31	1.6	0.05	99.9	99.9	99.9	99.9	7.0	1390	0.19	6000	99999	20
339102	999.9	50.0	51.1	999.9	59.6	54.3	999.9	999.9	999.9	999.9	63.4	60.2	999.9	64.4	67.6	999.9	999.9	999.9	999.9	4.0	0.31	1.6	0.05	99.9	99.9	99.9	99.9	5.5	800	0.12	4100	99999	20
339202	999.9	50.0	52.7	999.9	44.6	46.5	999.9	999.9	999.9	999.9	75.0	66.9	999.9	71.3	71.7	999.9	999.9	999.9	999.9	2.2	0.49	1.2	0.36	1.0	1.0	11.0	11.0	13.0	99999	9.99	1900	99999	4
339202	999.9	50.0	52.7	999.9	44.6	46.5	999.9	999.9	999.9	999.9	75.0	66.9	999.9	71.3	71.7	999.9	999.9	999.9	999.9	2.2	0.49	1.2	0.36	0.5	0.5	9.0	9.0	13.0	99999	9.99	1900	99999	4
339202	999.9	48.0	50.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.0	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.2	0.49	1.2	0.36	0.5	0.5	15.0	15.0	13.0	99999	9.99	1800	99999	4
339202	999.9	48.0	50.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.0	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.2	0.49	1.2	0.36	0.5	0.5	9.0	9.0	13.0	99999	9.99	1700	99999	3
339302	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.39	99.9	99.9	99.9	99.9	12.0	99999	9.99	99999	99999	999
339302	999.9	48.0	50.9	999.9	51.2	47.1	999.9	999.9	999.9	999.9	68.5	65.0	999.9	68.2	72.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.0	99999	9.99	99999	99999	999
339302	999.9	48.4	56.9	999.9	51.2	47.1	999.9	999.9	999.9	999.9	68.5	65.0	999.9	68.2	72.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.0	99999	9.99	99999	99999	999
339302	999.9	56.0	51.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.0	99999	9.99	99999	99999	999
339302	999.9	56.0	51.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.0	2400	0.19	99999	99999	30
339302	999.9	56.0	52.7	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.3	2100	0.16	99999	99999	31
339302	999.9	56.0	51.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.9	1690	0.13	99999	99999	36
339302	999.9	57.0	63.0	999.9	73.6	53.9	999.9	999.9	999.9	999.9	62.2	61.1	999.9	59.9	67.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.39	99.9	99.9	99.9	99.9	12.9	1720	0.14	99999	99999	36
339302	999.9	57.0	63.0	999.9	73.6	53.9	999.9	999.9	999.9	999.9	62.2	61.1	999.9	59.9	67.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.0	1750	0.14	99999	99999	36
339302	999.9	56.7	63.0	999.9	58.1	53.9	999.9	999.9	999.9	999.9	61.3	60.4	999.9	62.0	66.0	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.7	1900	0.19	99999	99999	36
339302	999.9	60.4	57.1	999.9	64.1	61.4	999.9	999.9	999.9	999.9	57.5	66.7	999.9	59.7	65.0	999.9	999.9	999.9	999.9	3.3	0.14	2.3	0.03	99.9	99.9	99.9	99.9	12.0	2090	0.16	99999	99999	36
339402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.39	99.9	99.9	99.9	99.9	12.3	99999	9.99	99999	99999	999
339402	999.9	48.4	50.9	999.9	51.2	47.1	999.9	999.9	999.9	999.9	68.5	65.0	999.9	68.2	72.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.3	99999	9.99	99999	99999	999
339402	999.9	48.4	50.9	999.9	51.2	47.1	999.9	999.9	999.9	999.9	68.5	65.1	999.9	68.2	72.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.3	99999	9.99	99999	99999	999
339402	999.9	56.0	51.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.3	99999	9.99	99999	99999	999
339402	999.9	56.0	51.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	12.3	99999	9.99	99999	99999	999
339402	999.9	57.0	63.0	999.9	73.6	53.9	999.9	999.9	999.9	999.9	62.2	61.1	999.9	59.0	67.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	4.5	1000	0.14	600	99999	11

Table III-37

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	RI 0	RI 3	RI 6	RI 9	RI 12	RI 15	RI 18	RI 21	RI 24	RI AVG 0-6	RI AVG 3-9	RI AVG 6-12	RI AVG 9-15	RI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	* RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
339402	2	1	76	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339402	2	1	76	0.379	0.50	5	21	26	19	34	27	30	30	45	15	26	21	[illegible]	[illegible]	0.66	0.97	0.67	0.54	0.71	10	11	13	12	21	99	
339402	2	1	76	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	[illegible]	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339402	2	1	76	0.379	0.50	4	21	20	21	23	36	31	29	32	17	22	23	26	[illegible]	0.71	0.86	0.57	0.66	0.71	12	12	13	1	21	99	
339402	2	1	76	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	[illegible]	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339402	2	1	76	0.379	0.50	5	14	19	21	20	33	40	36	31	13	18	20	[illegible]	[illegible]	0.97	0.98	0.67	0.69	0.71	7	18	13	1	22	99	
339502	2	1	66	0.379	0.50	23	35	44	38	32	39	56	46	52	34	39	38	36	[illegible]	0.05	0.73	0.75	0.67	0.98	22	20	29	24	[illegible]	99	40% constant slip; parallel to test 393 & 394.
339502	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	23	25	25	23	31	99	
339502	2	1	66	0.379	0.50	19	41	32	32	31	33	46	48	46	31	39	32	32	34	0.02	0.64	0.69	0.65	0.66	19	23	22	21	22	99	
339502	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	16	19	28	28	23	99	
339502	2	1	66	0.379	0.50	12	27	29	26	28	49	43	49	56	33	27	28	31	31	0.86	0.99	0.66	0.50	0.50	12	16	18	13	18	99	
339502	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	12	16	17	19	20	99	
339502	2	1	66	0.379	0.50	11	31	26	25	22	48	48	39	49	33	26	24	31	37	0.02	0.60	0.60	0.59	0.53	11	17	16	13	20	99	
339502	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	11	19	17	18	19	99	
339502	2	1	66	0.379	0.50	5	20	31	30	35	37	38	39	33	31	29	28	30	33	0.47	0.79	0.69	9.99	0.58	18	21	18	18	[illegible]	99	
339602	2	1	66	0.379	0.50	23	39	44	38	32	39	56	46	52	34	39	38	36	43	0.05	0.73	0.70	0.67	0.50	22	20	29	24	25	99	20% constant slip; parallel to 393, 394, & 395; 30% NW veg 4" or less.
339602	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339602	2	1	66	0.379	0.50	19	41	38	32	31	33	46	48	46	31	38	32	32	34	0.02	0.64	0.69	0.65	0.60	19	23	22	21	22	99	
339602	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339602	2	1	66	0.379	0.50	12	27	29	30	20	48	48	49	56	33	27	28	31	37	0.96	0.89	0.66	0.50	0.50	12	16	18	18	18	99	
339602	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339602	2	1	66	0.379	0.50	11	30	20	25	22	48	48	39	49	33	26	24	31	38	0.02	0.60	0.60	0.59	0.53	11	17	16	18	20	99	
339602	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339602	2	1	66	0.379	0.50	5	20	31	29	35	37	38	39	33	31	29	28	30	33	0.47	0.74	0.69	9.99	0.58	18	21	18	18	17	99	
339602	2	1	66	0.379	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	99	
339602	2	1	66	0.379	0.50	5	22	28	22	25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	28	28	29	41	0.44	0.88	0.51	0.49	0.47	7	11	18	14	19	99	
339702	2	1	40	0.379	0.50	30	31	26	30	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	33	45	41	0.74	0.80	0.77	9.99	0.94	23	23	25	999	48	99	No veg; DB slip.
339702	2	1	40	0.379	0.50	30	30	26	30	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	33	45	41	0.74	0.80	0.77	9.99	0.94	23	23	25	999	48	99	
339702	2	1	40	0.379	0.50	30	30	20	30	43	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	33	43	50	0.74	0.80	0.77	9.99	0.94	23	23	25	999	48	99	
339702	2	1	40	0.379	0.50	40	40	31	30	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	34	44	51	0.70	0.70	0.70	9.99	9.99	20	20	20	999	999	99	
339702	2	1	40	0.379	0.50	40	40	31	30	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	34	44	[illegible]	0.70	0.70	0.70	9.99	9.99	20	20	20	999	999	99	
339702	2	1	40	0.379	0.50	40	40	31	30	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	34	44	51	0.70	0.70	0.70	9.99	9.99	20	20	20	999	999	99	
339702	2	1	40	0.379	0.50	35	42	33	33	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	34	30	44	40	0.70	0.70	0.74	9.99	0.61	20	20	20	999	29	99	
339802	2	1	40	0.379	0.50	41	30	42	40	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	43	40	94	0.02	0.08	0.76	0.63	0.50	33	32	33	31	27	99	DB slip; this test run thru test 392. Same RI used.
339802	2	1	40	0.379	0.50	41	30	42	40	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	43	40	94	0.08	0.08	0.76	0.63	0.90	33	32	33	31	27	99	
339802	2	1	40	0.379	0.50	41	30	42	40	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	43	40	94	0.08	0.08	0.76	0.63	0.90	33	32	33	31	27	99	
339802	2	1	40	0.379	0.50	41	30	42	40	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	43	40	94	0.08	0.08	0.76	0.63	0.90	33	32	33	31	27	99	
339802	2	1	40	0.379	0.50	36	40	43	41	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	30	44	91	0.08	0.00	0.76	0.63	0.90	33	33	29	28	26	99	
339802	2	1	40	0.379	0.50	36	40	43	41	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	30	44	91	0.08	0.00	0.76	0.63	0.90	33	33	29	28	26	99	
339802	2	1	40	0.379	0.50	36	40	43	41	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	41	30	44	91	0.08	0.00	0.76	0.63	0.90	33	33	29	28	26	99	
339902	3	1	90	0.379	0.50	33	33	30	41	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37	41	46	40	0.72	0.67	0.64	9.99	9.99	20	29	25	999	999	99	Vehicle had some difficulty on turns; 20% NW veg 2" or less.
339902	3	1	90	0.379	0.50	32	36	40	30	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	40	44	40	0.72	0.67	0.64	9.99	9.99	27	27	20	999	999	99	
339902	3	1	90	0.379	0.50	33	39	40	40	97	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	46	53	99	0.79	0.67	0.64	9.99	9.99	30	27	38	999	999	99	
339902	3	1	90	0.379	0.50	35	36	44	45	53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	40	47	50	98	0.79	0.67	0.64	9.99	9.99	34	32	31	999	999	99	
340002	2	1	90	0.379	0.50	36	37	31	30	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	37	44	40	0.01	0.00	0.71	0.00	0.90	18	20	26	30	43	99	40% constant slip.
340002	2	1	90	0.379	0.50	31	35	20	20	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	31	40	47	0.01	0.00	0.71	0.75	0.70	18	19	22	32	36	99	
340002	2	1	90	0.379	0.50	30	23	24	20	49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	34	[illegible]	2	0.70	0.70	0.70	0.70	0.03	1	20	26	32	33	99	
340102	2	1	90	0.379	0.50	29	29	20	24	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26	30	37	43	0.00	0.71	0.75	0.72	0.00	19	19	22	27	30	99	40% constant slip: 20% NW veg 2" or less.

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER TAU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	8	B/R	SLIP PONT
339402	999.9	97.0	63.0	999.9	73.0	53.9	999.9	999.9	999.9	999.9	62.2	61.1	999.9	59.9	67.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	4.5	1000	0.14	680	99999	11
339402	999.9	97.0	63.0	999.9	73.0	53.9	999.9	999.9	999.9	999.9	62.2	61.1	999.9	59.9	67.5	999.9	999.9	999.9	999.9	4.3	0.31	1.3	0.30	99.9	99.9	99.9	99.9	4.5	1000	0.14	680	99999	11
339402	999.9	99.7	60.0	999.9	56.1	53.0	999.9	999.9	999.9	999.9	60.3	60.4	999.9	62.0	66.6	999.9	999.9	999.9	999.9	3.3	0.14	2.3	0.03	99.9	99.9	99.9	99.9	1.0	1000	0.14	680	99999	11
339402	999.9	99.7	60.0	999.9	56.1	53.0	999.9	999.9	999.9	999.9	60.3	60.4	999.9	62.0	66.6	999.9	999.9	999.9	999.9	3.3	0.14	2.3	0.03	99.9	99.9	99.9	99.9	1.0	1000	0.14	680	99999	11
339402	999.9	99.7	60.0	999.9	56.1	53.0	999.9	999.9	999.9	999.9	60.3	60.4	999.9	62.0	66.6	999.9	999.9	999.9	999.9	3.3	0.14	2.3	0.03	99.9	99.9	99.9	99.9	1.0	1000	0.14	680	99999	11
339402	999.9	60.4	97.1	999.9	64.1	64.1	999.9	999.9	999.9	999.9	57.5	66.7	999.9	59.7	65.0	999.9	999.9	999.9	999.9	3.3	0.14	2.3	0.03	99.9	99.9	99.9	99.9	2.5	1000	0.14	680	99999	11
339502	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	2.5	2370	0.40	[illegible]	99999	40
339502	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	2.5	1690	0.28	[illegible]	99999	32
339502	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	2.5	1990	0.33	[illegible]	99999	38
339502	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	2.5	1090	0.32	[illegible]	99999	33
339502	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	4.0	990	0.10	[illegible]	99999	[illegible]
339502	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	790	0.18	[illegible]	99999	[illegible]
339502	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	4.0	1100	0.10	[illegible]	99999	41
339502	999.9	60.2	94.5	999.9	70.7	56.7	999.9	999.9	999.9	999.9	57.5	66.7	999.9	46.6	61.5	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	3.0	[illegible]	0.13	[illegible]	99999	30
339502	999.9	60.2	94.5	999.9	70.7	56.7	999.9	999.9	999.9	999.9	57.5	66.7	999.9	46.6	61.5	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	3.0	99999	0.99	[illegible]	99999	[illegible]
339602	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	3100	0.03	[illegible]	99999	[illegible]
339602	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	1530	0.00	[illegible]	99999	17
339602	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	1470	0.29	1000	99999	14
339602	999.9	96.0	91.9	999.9	52.3	47.8	999.9	999.9	999.9	999.9	61.5	69.2	999.9	65.6	73.3	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	1610	0.27	1000	99999	[illegible]
339602	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	1640	0.28	1000	99999	10
339602	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	6.0	990	0.17	[illegible]	99999	[illegible]
339602	999.9	66.3	90.6	999.9	63.8	49.5	999.9	999.9	999.9	999.9	55.1	64.9	999.9	58.1	71.9	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	3.0	390	0.07	1000	99999	10
339602	999.9	60.2	94.5	999.9	70.7	56.7	999.9	999.9	999.9	999.9	57.5	66.7	999.9	46.6	61.5	999.9	999.9	999.9	999.9	2.0	0.25	1.3	0.32	99.9	99.9	99.9	99.9	3.0	950	0.10	[illegible]	99999	17
339602	999.9	60.2	94.5	999.9	70.7	56.7	999.9	999.9	999.9	999.9	57.5	66.7	999.9	46.6	61.5	999.9	999.9	999.9	999.9	3.0	0.27	1.3	0.32	99.9	99.9	99.9	99.9	3.0	710	0.12	[illegible]	99999	10
339602	999.9	60.2	94.5	999.9	70.7	56.7	999.9	999.9	999.9	999.9	57.5	66.7	999.9	46.6	61.5	999.9	999.9	999.9	999.9	3.0	0.27	1.3	0.32	99.9	99.9	99.9	99.9	3.0	[illegible]	0.13	1000	99999	17
339602	999.9	66.0	61.9	999.9	75.2	48.9	999.9	999.9	999.9	999.9	58.9	62.3	999.9	54.5	72.3	999.9	999.9	999.9	999.9	3.0	0.27	1.3	0.32	99.9	99.9	99.9	99.9	3.0	[illegible]	0.13	1400	99999	15
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	1400	0.20	[illegible]	99999	7
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	2930	0.40	[illegible]	99999	12
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	3610	0.51	12000	99999	[illegible]
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	4100	0.57	13400	99999	34
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	4300	0.60	14000	99999	40
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	4200	0.59	14040	99999	[illegible]
339702	999.9	30.1	40.6	999.9	45.5	51.4	999.9	999.9	999.9	999.9	73.9	67.6	999.9	64.9	68.7	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	15.0	4950	0.68	13970	99999	[illegible]
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	13.0	2100	0.30	7900	99999	7
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	13.0	3220	0.42	9090	99999	12
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	13.0	3710	0.51	11900	99999	[illegible]
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	13.0	4050	0.56	[illegible]	99999	30
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.59	99.9	99.9	99.9	99.9	13.0	4090	0.56	[illegible]	99999	30
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.55	99.9	99.9	99.9	99.9	13.0	4040	0.56	12990	99999	49
339802	999.9	45.1	58.0	999.9	47.0	48.2	999.9	999.9	999.9	999.9	72.1	66.5	999.9	71.5	72.1	999.9	999.9	999.9	999.9	2.0	0.73	1.3	0.55	99.9	99.9	99.9	99.9	13.0	4190	0.56	12990	99999	96
339902	999.9	47.2	55.0	999.9	50.4	49.3	999.9	999.9	999.9	999.9	67.5	60.1	999.9	61.6	71.0	999.9	999.9	999.9	999.9	2.0	0.51	0.1	0.40	4.5	4.5	14.5	14.5	13.0	99999	0.99	[illegible]	99999	0
339902	999.9	47.2	55.0	999.9	50.4	49.3	999.9	999.9	999.9	999.9	67.5	60.1	999.9	61.6	71.0	999.9	999.9	999.9	999.9	2.0	0.51	0.1	0.40	4.0	4.0	14.5	14.5	13.0	99999	0.99	7000	99999	0
339902	999.9	47.2	55.0	999.9	50.4	49.3	999.9	999.9	999.9	999.9	67.5	60.1	999.9	61.6	71.0	999.9	999.9	999.9	999.9	1.0	0.54	0.3	0.55	3.0	3.0	13.0	13.0	13.0	99999	0.99	7000	99999	0
339902	999.9	47.2	55.0	999.9	50.4	49.3	999.9	999.9	999.9	999.9	67.5	60.1	999.9	61.6	71.0	999.9	999.9	999.9	999.9	1.0	0.50	0.3	0.55	7.5	7.5	99.9	99.9	13.0	99999	0.99	6600	99999	0
340002	999.9	44.0	40.1	999.9	53.4	64.9	999.9	999.9	999.9	999.9	71.9	60.5	999.9	64.9	72.3	999.9	999.9	999.9	999.9	1.1	0.42	0.1	0.53	99.9	99.9	99.9	99.9	13.0	4900	0.29	20000	99999	21
340002	999.9	44.0	40.1	999.9	53.4	64.9	999.9	999.9	999.9	999.9	71.9	60.5	999.9	64.9	72.3	999.9	999.9	999.9	999.9	1.1	0.42	0.1	0.53	99.9	99.9	99.9	99.9	13.0	3550	0.10	27000	99999	24
340002	999.9	46.0	38.7	999.9	65.0	63.3	999.9	999.9	999.9	999.9	62.8	67.9	999.9	59.9	48.1	999.9	999.9	999.9	999.9	1.1	0.42	0.1	0.53	99.9	99.9	99.9	99.9	13.0	3650	0.19	20000	99999	[illegible]
340102	999.9	94.8	38.7	999.9	55.1	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	[illegible]	0.50	0.3	0.50	99.9	99.9	99.9	99.9	14.0	6750	0.34	34300	99999	[illegible]

Table III-38

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	PENETROMETER TYPE: CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
340102	2	1	50	0.375	0.50	29	29	26	24	41	45	44	38	46	28	26	30	37	43	0.68	0.71	0.75	0.72	0.69	19	13	22	27	30	99	
340102	2	1	50	0.375	0.50	29	29	26	24	41	45	44	38	46	28	26	30	37	43	0.68	0.71	0.75	0.72	0.69	19	18	22	27	30	99	
340102	2	1	50	0.375	0.50	29	27	28	32	46	43	41	47	46	33	27	39	41	43	0.59	0.88	0.6	0.72	0.76	16	23	23	29	33	99	
340102	2	1	50	0.375	0.50	29	27	28	32	46	43	41	47	46	34	27	39	41	43	0.59	0.88	0.6	0.72	0.79	15	23	23	29	33	99	
340102	2	1	50	0.375	0.50	43	31	39	30	41	44	41	38	34	38	36	40	42	43	0.67	0.72	0.71	0.72	0.72	25	20	28	38	31	99	
340102	2	1	50	0.375	0.50	43	31	39	30	41	44	41	38	34	38	36	40	42	43	0.67	0.72	0.71	0.72	0.72	25	20	28	38	31	99	
340102	2	1	50	0.375	0.50	43	31	39	30	41	44	41	38	34	38	36	40	42	43	0.67	0.72	0.71	0.72	0.72	25	20	28	38	31	99	
340202	1	1	48	0.375	0.50	22	25	23	29	48	48	34	30	28	33	26	33	36	41	0.71	0.90	0.43	0.66	0.69	16	15	16	26	36	0	100% slip due to slipperiness only; 50% MW veg. 6" or less.
340202	1	1	48	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	16	15	14	26	36	1	
340202	1	1	48	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	16	15	14	26	36	3	
340302	2	1	50	0.375	0.50	29	29	26	24	41	45	44	38	46	28	26	38	37	43	0.68	0.71	0.75	0.72	0.69	19	18	22	27	38	0	20% constant slip; use soil data from test 401
340302	2	1	50	0.375	0.50	29	27	28	32	46	43	41	47	46	28	27	39	41	43	0.59	0.88	0.67	0.72	0.76	16	23	23	29	33	0	
340302	2	1	50	0.375	0.50	43	31	39	30	41	44	41	38	34	38	36	40	42	43	0.67	0.72	0.31	0.2	0.72	25	20	28	30	31	0	
340401	1	1	76	0.375	0.50	6	9	8	8	8	19	33	34	35	7	7	7	11	20	0.59	0.66	0.67	0.55	0.43	4	5	5	6	9	0	100% slip due to sinkage; dragging on 2nd pass; tilting to lt; no veg.
340401	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
340401	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
340501	1	1	76	0.375	0.50	9	9	8	8	8	16	33	36	34	8	7	7	10	19	0.64	0.79	0.60	0.59	0.52	5	5	5	6	10	0	100% slip due to sinkage; dragging on 3rd pass; tilting to lt; no veg.
340501	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
340501	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
340602	4	1	66	0.375	0.50	44	55	51	46	64	66	63	67	66	58	51	54	59	64	0.75	0.75	0.82	0.79	0.76	38	38	44	47	49	5	
340602	4	1	66	0.375	0.50	44	55	51	46	64	66	63	67	66	58	51	54	59	64	0.75	0.75	0.82	0.79	0.76	38	38	44	47	49	0	
340602	4	1	66	0.375	0.50	44	55	51	46	64	66	63	67	66	58	51	54	59	64	0.75	0.75	0.82	0.79	0.76	38	38	44	47	49	0	
340602	4	1	66	0.375	0.50	44	55	51	46	64	66	63	67	66	58	51	54	59	64	0.75	0.75	0.82	0.79	0.76	38	38	44	47	49	0	
340702	3	1	48	0.375	0.50	36	46	40	49	61	68	63	67	64	43	46	51	58	64	0.79	0.74	0.82	0.79	0.76	32	34	42	46	49	0	Soil data from test 406 used for 1st part of this test.
340702	3	1	49	0.375	0.50	36	48	47	39	48	58	68	54	56	44	48	49	48	55	0.72	0.78	0.78	0.78	0.80	32	34	34	37	44	0	
340702	3	1	48	0.375	0.50	38	49	43	35	44	61	68	55	64	48	41	41	47	55	0.75	0.74	0.82	0.79	0.74	32	38	34	37	42	0	
340702	3	1	48	0.375	0.50	60	47	46	48	58	67	65	55	58	51	45	44	53	61	0.72	0.79	0.74	0.77	0.80	37	36	34	41	49	0	
340802	3	1	49	0.375	0.50	63	66	57	71	76	71	71	69	63	68	68	68	73	73	0.91	0.76	0.63	0.6	0.80	56	49	56	55	58	0	Area mowed before test (was 100% MW veg 10" or less)
340802	3	1	49	0.375	0.50	59	64	59	67	68	73	85	80	72	61	63	65	69	75	0.91	0.76	0.63	0.76	0.88	56	48	56	52	51	0	
340802	3	1	49	0.375	0.50	57	64	50	72	75	77	70	71	68	60	66	69	75	77	0.78	0.89	0.76	0.3	0.67	47	55	52	55	58	0	
340802	3	1	48	0.375	0.50	56	63	60	72	75	73	74	62	59	68	68	60	73	76	0.78	0.88	0.78	0.3	0.67	47	55	54	55	58	0	
340902	3	1	66	0.375	0.50	104	68	60	74	79	72	68	58	56	68	67	72	74	69	1.00	0.83	0.81	0.84	0.80	62	56	58	62	61	0	- - - - - - - - - 18" - -
340902	3	1	66	0.375	0.50	57	56	71	59	60	59	58	60	58	61	62	63	59	57	1.00	0.83	0.81	0.84	0.80	61	51	51	58	58	0	
340902	3	1	66	0.375	0.50	54	56	63	73	64	64	59	66	49	58	64	67	67	62	1.00	0.83	0.81	0.84	0.80	58	53	54	56	54	0	
340902	3	1	66	0.375	0.50	66	72	79	75	68	65	44	47	68	72	72	71	67	56	1.00	0.83	0.81	0.84	0.80	72	62	58	56	49	0	
341002	3	1	70	0.375	0.50	104	68	66	74	79	72	68	58	56	68	67	72	74	69	1.00	0.83	0.81	0.84	0.80	68	56	58	62	61	0	This test run in same area as 410; same soil data used.
341002	3	1	70	0.375	0.50	57	56	71	59	60	59	58	60	58	61	62	63	59	57	1.00	0.83	0.81	0.84	0.80	61	51	51	58	58	0	
341002	3	1	70	0.375	0.50	54	56	63	73	64	64	50	60	49	58	64	67	67	62	1.00	0.83	0.81	0.84	0.80	58	53	54	56	54	0	
341002	3	1	70	0.375	0.50	66	72	79	75	68	65	44	47	68	72	75	71	67	56	1.00	0.83	0.81	0.84	0.80	72	62	58	56	49	0	
341102	3	1	58	0.375	0.50	104	68	66	74	79	72	68	58	56	68	67	72	74	69	1.00	0.83	0.81	0.84	0.80	68	56	58	62	61	0	- - - - - - - - - - - -
341102	3	1	58	0.375	0.50	57	56	71	59	60	59	58	60	58	61	62	63	59	57	1.00	0.83	0.81	0.84	0.80	61	58	51	51	58	0	
341102	3	1	58	0.375	0.50	54	56	63	73	64	64	50	60	49	58	64	67	67	62	1.00	0.83	0.81	0.84	0.80	58	53	54	56	54	0	
341102	3	1	58	0.375	0.50	66	72	79	75	68	65	44	47	68	72	75	71	67	56	1.00	0.83	0.81	0.84	0.80	72	62	58	56	49	0	
341202	4	1	76	0.375	0.50	56	60	71	88	72	64	50	51	54	68	74	79	73	68	0.70	0.88	0.88	0.70	0.77	51	59	68	57	58	0	See table 47.
341202	4	1	76	0.375	0.50	56	60	71	88	72	64	50	51	54	68	74	79	73	68	0.70	0.88	0.88	0.70	0.77	51	59	68	57	58	0	- - -
341202	4	1	76	0.375	0.50	56	60	71	88	72	64	50	51	54	68	74	79	73	68	0.70	0.88	0.88	0.70	0.77	51	59	68	57	58	0	- - -
341202	4	1	76	0.375	0.50	56	60	71	88	72	64	50	51	54	68	74	79	73	68	0.70	0.88	0.88	0.70	0.77	51	59	68	57	58	0	- - -
341202	4	1	76	0.375	0.50	56	60	71	88	72	64	50	51	54	68	74	79	73	68	0.70	0.88	0.88	0.70	0.77	51	59	68	57	58	0	- - -

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE Cu	VANE TAN PHI	HUGGER Au	HUGGER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	O/R	SLIP POINT
340102	999.9	34.8	58.7	999.9	55.3	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	0.9	0.59	0.3	0.59	99.9	99.9	99.9	99.9	14.0	6020	0.35	32000	99999	17
340102	999.9	34.8	58.7	999.9	55.3	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	0.9	0.59	0.3	0.50	99.9	99.9	99.9	99.9	14.0	6790	0.35	32000	99999	19
340102	999.9	47.3	58.6	999.9	51.2	51.3	999.9	999.9	999.9	999.9	78.8	65.0	999.9	60.3	66.3	999.9	999.9	999.9	999.9	0.9	0.59	0.3	0.50	99.9	99.9	99.9	99.9	11.5	4990	0.26	28100	99999	22
340102	999.9	47.3	58.6	999.9	51.2	51.3	999.9	999.9	999.9	999.9	78.8	65.0	999.9	60.3	66.3	999.9	999.9	999.9	999.9	1.9	0.54	0.3	0.58	99.9	99.9	99.9	99.9	11.5	6000	0.31	20900	99999	11
340102	999.9	47.3	58.6	999.9	51.2	51.3	999.9	999.9	999.9	999.9	78.8	65.0	999.9	60.3	66.3	999.9	999.9	999.9	999.9	1.9	0.59	0.3	0.50	99.9	99.9	99.9	99.9	11.5	5300	0.27	24700	99999	3
340102	999.9	47.3	58.6	999.9	51.2	51.3	999.9	999.9	999.9	999.9	78.8	65.0	999.9	60.3	66.3	999.9	999.9	999.9	999.9	1.9	0.59	0.3	0.50	99.9	99.9	99.9	99.9	11.5	4290	0.22	29000	99999	34
340102	999.9	47.3	58.6	999.9	51.2	51.3	999.9	999.9	999.9	999.9	78.8	65.0	999.9	60.3	66.3	999.9	999.9	999.9	999.9	1.9	0.59	0.3	0.50	99.9	99.9	99.9	99.9	11.5	2710	0.14	20000	99999	40
340202	999.9	38.3	48.2	999.9	59.4	63.2	999.9	999.9	999.9	999.9	69.5	68.2	999.9	62.1	57.7	999.9	999.9	999.9	999.9	1.0	0.36	0.3	0.31	99.9	99.9	99.9	99.9	0.0	99999	9.99	99999	99999	999
340202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.5	4.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
340202	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.0	11.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
340302	999.9	34.8	58.7	999.9	55.3	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	1.3	0.36	0.3	0.31	99.9	99.9	99.9	99.9	14.0	7390	0.38	34000	99999	15
340302	999.9	34.8	58.7	999.9	55.3	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	5070	0.26	27300	99999	16
340302	999.9	34.8	58.7	999.9	55.3	47.2	999.9	999.9	999.9	999.9	66.7	63.0	999.9	66.7	78.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	3510	0.18	24000	99999	16
340401	999.9	70.6	79.9	999.9	109.1	60.5	999.9	999.9	999.9	999.9	52.9	52.2	999.9	41.8	61.5	999.9	999.9	999.9	999.9	2.7	0.33	2.0	0.29	99.9	99.9	99.9	99.9	4.0	99999	9.99	99999	99999	999
340401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
340401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.0	5.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
340501	999.9	51.7	76.1	999.9	112.2	93.9	999.9	999.9	999.9	999.9	67.4	53.7	999.9	43.0	46.3	999.9	999.9	999.9	999.9	2.5	0.31	2.0	0.29	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340501	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	2.0	1.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
340501	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
340602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340602	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	1.7	99999	9.99	2590	99999	9
340702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	1.7	99999	9.99	1800	99999	3
340702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	1.7	99999	9.99	1300	99999	2
340702	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	2.5	0.42	1.0	0.53	99.9	99.9	99.9	99.9	1.7	99999	9.99	980	99999	2
340802	999.9	30.1	46.9	999.9	46.9	45.0	999.9	999.9	999.9	999.9	76.3	68.1	999.9	77.7	74.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1000	99999	7
340802	999.9	30.1	46.9	999.9	46.9	45.0	999.9	999.9	999.9	999.9	76.3	68.1	999.9	77.7	74.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1000	99999	3
340802	999.9	30.6	48.8	999.9	47.4	48.2	999.9	999.9	999.9	999.9	74.2	72.7	999.9	68.8	73.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1300	99999	4
340802	999.9	30.6	48.8	999.9	47.4	48.2	999.9	999.9	999.9	999.9	74.2	72.7	999.9	68.8	73.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1800	99999	2
340902	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.0	0.0	21.5	21.5	99.9	99999	9.99	600	99999	999
340902	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.0	0.0	20.5	20.5	99.9	99999	9.99	495	99999	999
340902	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	22.5	22.5	99.9	99999	9.99	400	99999	999
340902	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.5	0.5	20.0	20.0	99.9	99999	9.99	380	99999	999
341002	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1004	99999	999
341002	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1046	99999	999
341002	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	1093	99999	999
341002	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	900	99999	999
341102	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	9000	99999	999
341102	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	4400	99999	999
341102	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	4300	99999	999
341102	999.9	35.4	48.1	999.9	46.8	45.1	999.9	999.9	999.9	999.9	82.8	74.9	999.9	76.4	72.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	3000	99999	999
341202	999.9	30.8	44.3	999.9	41.1	43.5	999.9	999.9	999.9	999.9	76.4	69.6	999.9	78.1	74.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
341202	999.9	30.8	44.3	999.9	41.1	43.5	999.9	999.9	999.9	999.9	76.4	69.6	999.9	78.1	74.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
341202	999.9	30.8	44.3	999.9	41.1	43.5	999.9	999.9	999.9	999.9	76.4	69.6	999.9	78.1	74.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
341202	999.9	30.8	44.3	999.9	41.1	43.5	999.9	999.9	999.9	999.9	76.4	69.6	999.9	78.1	74.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
341202	999.9	30.8	44.3	999.9	41.1	43.5	999.9	999.9	999.9	999.9	76.4	69.6	999.9	78.1	74.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-39

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE—STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
341202	4	1	70	0.379	0.50	56	60	71	82	72	64	58	51	54	65	74	79	73	65	0.78	0.88	0.80	0.78	0.77	51	59	61	56	50	0	See table 47.
341302	4	1	49	0.379	0.50	51	39	38	36	55	54	50	47	47	43	38	43	48	53	0.84	0.73	0.74	0.70	0.83	36	28	32	37	44	0	Area mowed (was 100%—24" or less) SFC cracked. See 47.
341302	4	1	49	0.379	0.50	51	39	38	36	55	54	50	47	47	43	38	43	48	53	0.84	0.73	0.74	0.70	0.83	36	28	32	37	44	0	See table 47.
341302	4	1	49	0.379	0.50	51	39	38	36	55	54	50	47	47	43	38	43	48	53	0.84	0.73	0.74	0.70	0.83	36	28	32	37	44	0	- - -
341302	4	1	49	0.379	0.50	51	39	38	36	55	54	50	47	47	43	38	43	48	53	0.84	0.73	0.74	0.70	0.83	36	28	32	37	44	0	- - -
341302	4	1	49	0.379	0.50	51	39	38	36	55	54	50	47	47	43	38	43	48	53	0.84	0.73	0.74	0.70	0.83	36	28	32	37	44	0	- - -
341402	4	1	49	0.379	0.50	46	53	41	30	50	40	37	34	37	47	44	43	45	49	0.86	0.80	0.80	0.72	0.58	40	30	37	32	26	0	- - -
341402	4	1	49	0.379	0.50	46	53	41	30	50	40	37	34	37	47	44	43	45	49	0.86	0.80	0.80	0.72	0.58	40	30	37	32	26	0	- - -
341402	4	1	49	0.379	0.50	46	53	41	30	50	40	37	34	37	47	44	43	45	49	0.86	0.80	0.80	0.72	0.58	40	30	37	32	26	0	- - -
341402	4	1	49	0.379	0.50	46	53	41	30	50	40	37	34	37	47	44	43	45	49	0.86	0.80	0.80	0.72	0.58	40	30	37	32	26	0	- - -
341502	4	1	58	0.379	0.50	40	40	34	37	49	52	53	58	47	38	37	40	46	51	0.81	0.70	0.60	0.50	0.57	33	26	24	27	29	0	- - -
341502	4	1	58	0.379	0.50	40	40	34	37	49	52	53	58	47	38	37	40	46	51	0.81	0.70	0.60	0.50	0.57	33	26	24	27	29	0	- - -
341502	4	1	58	0.379	0.50	40	40	34	37	49	52	53	58	47	38	37	40	46	51	0.81	0.70	0.60	0.50	0.57	33	26	24	27	29	0	- - -
341502	4	1	58	0.379	0.50	40	40	34	37	49	52	53	58	47	38	37	40	46	51	0.81	0.70	0.60	0.50	0.57	33	26	24	27	29	0	- - -
341602	4	1	58	0.379	0.50	53	60	54	58	57	67	67	71	74	56	56	54	59	64	1.00	0.70	0.76	0.77	0.78	56	42	41	45	50	0	- - -
341602	4	1	58	0.379	0.50	53	60	54	58	57	67	67	71	74	56	56	54	59	64	1.00	0.70	0.76	0.77	0.78	56	42	41	45	50	0	- - -
341602	4	1	58	0.379	0.50	53	60	54	58	57	67	67	71	74	56	56	54	59	64	1.00	0.70	0.76	0.77	0.78	56	42	41	45	50	0	- - -
341702	4	1	49	0.379	0.50	66	59	60	58	55	59	60	73	80	62	57	56	55	60	0.86	0.76	0.78	0.60	0.99	41	42	44	40	59	0	- - -
341702	4	1	49	0.379	0.50	66	59	60	58	55	59	69	73	80	62	57	56	55	60	0.86	0.76	0.78	0.60	0.99	41	42	44	40	59	0	- - -
341702	4	1	49	0.379	0.50	66	59	60	58	55	59	69	73	80	68	57	56	55	60	0.86	0.76	0.78	0.50	0.99	41	48	44	40	59	0	- - -
341802	4	1	49	0.379	0.50	29	31	27	28	30	56	49	48	42	29	29	31	41	40	0.89	0.70	0.65	0.70	0.83	19	20	21	31	40	99	- - -
341802	4	1	49	0.379	0.50	29	31	27	28	30	56	49	48	42	29	29	31	41	40	0.89	0.70	0.65	0.70	0.83	19	20	21	31	40	99	- - -
341802	4	1	49	0.379	0.50	29	31	27	28	38	56	49	48	42	29	29	31	41	40	0.89	0.70	0.60	0.70	0.83	19	20	21	31	40	99	- - -
341802	4	1	49	0.379	0.50	29	31	27	28	30	56	49	48	42	29	29	31	41	40	0.89	0.70	0.60	0.70	0.83	19	20	21	31	41	99	- - -
341902	2	1	66	0.379	0.50	40	52	38	32	47	54	40	40	44	41	39	37	44	50	0.81	0.73	0.51	0.51	0.40	29	28	19	22	24	99	20% constant slip: 80% NW veg 1' or less.
341902	2	1	66	0.379	0.50	37	36	28	30	47	48	40	40	49	34	31	35	42	47	0.81	0.73	0.51	0.51	0.40	21	28	18	21	22	99	
341902	2	1	66	0.379	0.50	30	43	30	29	30	40	58	44	30	37	34	32	38	45	0.81	0.73	0.51	0.53	0.40	22	26	18	19	22	99	
341902	2	1	66	0.379	0.50	12	26	28	24	33	42	39	36	32	22	26	28	33	38	0.82	0.68	0.51	0.53	0.48	14	18	14	16	18	99	
341902	2	1	66	0.379	0.50	7	24	28	28	31	36	38	39	29	17	21	24	29	34	0.82	0.66	0.51	0.50	0.48	14	13	12	14	16	99	
341902	2	1	66	0.379	0.50	7	20	22	20	34	36	39	39	27	19	23	29	38	35	0.82	0.68	0.51	0.51	0.59	12	14	18	14	19	99	
341902	2	1	66	0.379	0.50	11	22	28	10	86	36	34	36	27	18	20	21	27	32	0.89	0.71	0.64	0.64	0.68	11	14	14	19	20	99	
341902	2	1	66	0.379	0.50	11	28	28	28	33	37	30	39	28	18	21	24	30	34	0.89	0.71	0.64	0.64	0.62	11	15	14	19	21	99	
342002	2	1	66	0.379	0.50	40	52	38	32	47	54	40	40	44	41	39	37	44	50	0.81	0.73	0.51	0.51	0.40	29	28	19	22	24	99	40% constant slip: 80% NW veg 1' or less; use soil data
342002	2	1	66	0.379	0.50	37	36	20	30	47	48	40	40	49	34	31	35	42	47	0.81	0.73	0.51	0.51	0.40	21	23	18	21	22	99	from 419.
342002	2	1	66	0.379	0.50	30	43	30	29	30	40	50	44	30	37	34	32	39	45	0.81	0.73	0.51	0.58	0.40	22	25	18	20	22	99	
342102	2	1	66	0.379	0.50	12	26	20	24	33	42	39	30	32	22	26	20	33	38	0.82	0.66	0.51	0.50	0.48	14	14	14	16	18	99	Test 420 was divided into two parts. This is 2nd part.
342102	2	1	66	0.379	0.50	7	24	20	20	31	36	30	39	29	17	21	24	29	34	0.82	0.66	0.51	0.49	0.48	10	13	12	14	16	99	
342102	2	1	66	0.379	0.50	7	29	22	20	34	36	39	39	27	19	23	29	30	35	0.82	0.68	0.51	0.51	0.59	12	14	14	15	19	99	
342102	2	1	66	0.379	0.50	11	22	20	10	86	36	34	36	27	18	20	21	30	34	0.89	0.71	0.64	0.64	0.62	11	14	14	19	21	99	
342102	2	1	66	0.379	0.50	11	28	28	20	33	37	30	39	28	18	21	24	30	34	0.89	0.71	0.64	0.64	0.62	11	15	14	19	21	99	
342202	2	1	66	0.379	0.50	93	09	110	99	95	82	08	03	69	83	97	100	91	86	0.87	0.88	0.80	0.81	0.76	72	85	86	74	65	99	20% constant slip: 20% NW veg (grass stubbles) 3" or
342202	2	1	66	0.379	0.50	97	70	98	92	78	72	87	88	70	76	88	88	81	79	0.87	0.88	0.80	0.81	0.76	66	77	76	66	60	99	less.
342202	2	1	66	0.379	0.50	98	75	104	92	85	79	88	82	81	79	90	94	84	83	0.87	0.88	0.80	0.81	0.76	69	72	80	68	63	99	
342202	2	1	66	0.379	0.50	96	82	98	99	88	83	81	73	81	79	90	92	89	84	0.87	0.88	0.80	0.81	0.76	68	79	79	72	64	99	
342202	2	1	66	0.379	0.50	93	84	99	94	84	81	96	99	72	77	91	91	86	87	0.87	0.88	0.80	0.81	0.76	67	80	78	70	69	99	
342302	2	1	66	0.379	0.50	93	85	110	95	95	82	82	83	69	83	97	100	91	86	0.87	0.88	0.80	0.81	0.76	72	85	86	74	65	99	40% constant slip: 20% NW veg (grass stubbles) 3" or
342302	2	1	66	0.379	0.50	97	70	98	92	78	72	87	88	70	76	88	88	81	79	0.87	0.88	0.80	0.81	0.76	66	77	76	66	60	99	less.
342302	2	1	66	0.379	0.50	98	75	104	92	85	79	88	82	81	79	90	94	84	83	0.87	0.88	0.80	0.81	0.76	69	79	80	68	63	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH— VANE Cu	PHI	RUBBER Au	TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	B/R	SLIP PCNT
341202	999.0	30.8	44.3	999.0	41.1	43.5	999.0	999.0	999.0	999.0	76.4	69.6	999.0	78.1	74.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	36.3	99999	9.99	99999	99999	999
341302	999.0	30.8	44.6	999.0	51.0	44.4	999.0	999.0	999.0	999.0	73.0	73.1	999.0	66.0	71.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	36.3	99999	9.99	99999	99999	999
341302	999.0	30.8	44.6	999.0	51.0	44.4	999.0	999.0	999.0	999.0	73.0	73.1	999.0	66.0	71.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	36.3	99999	9.99	99999	99999	999
341302	999.0	30.8	44.6	999.0	51.0	44.4	999.0	999.0	999.0	999.0	73.0	73.1	999.0	66.0	71.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	36.3	99999	9.99	99999	99999	999
341302	999.0	30.8	44.6	999.0	51.0	44.4	999.0	999.0	999.0	999.0	73.0	73.1	999.0	66.0	71.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	34.3	99999	9.99	99999	99999	999
341302	999.0	30.8	44.6	999.0	51.0	44.4	999.0	999.0	999.0	999.0	73.0	73.1	999.0	66.0	71.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	34.3	99999	9.99	99999	99999	999
341402	999.0	38.0	60.0	999.0	55.0	50.4	999.0	999.0	999.0	999.0	67.4	59.8	999.0	66.3	66.4	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	17.3	99999	9.99	99999	99999	999
341402	999.0	38.0	60.0	999.0	55.0	50.4	999.0	999.0	999.0	999.0	67.4	59.8	999.0	66.3	66.4	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	17.3	99999	9.99	99999	99999	999
341402	999.0	43.2	60.5	999.0	56.0	54.3	999.0	999.0	999.0	999.0	72.4	57.9	999.0	69.0	66.7	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	17.3	99999	9.99	99999	99999	999
341402	999.0	43.2	60.5	999.0	56.0	54.3	999.0	999.0	999.0	999.0	72.4	57.9	999.0	69.0	66.7	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	17.3	99999	9.99	99999	99999	999
341502	999.0	30.3	51.6	999.0	47.0	49.4	999.0	999.0	999.0	999.0	63.2	67.4	999.0	70.2	70.2	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341502	999.0	30.3	51.6	999.0	47.0	49.4	999.0	999.0	999.0	999.0	63.2	67.4	999.0	70.2	70.2	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341502	999.0	30.3	51.6	999.0	47.0	49.4	999.0	999.0	999.0	999.0	63.2	67.4	999.0	70.2	70.2	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341502	999.0	30.3	51.6	999.0	47.0	49.4	999.0	999.0	999.0	999.0	63.2	67.4	999.0	70.2	70.2	999.0	999.0	999.0	999.0	0.3	0.78	0.2	0.67	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341602	999.0	30.0	37.0	999.0	46.2	35.2	999.0	999.0	999.0	999.0	70.6	65.2	999.0	66.2	61.8	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341602	999.0	30.0	37.0	999.0	46.2	35.2	999.0	999.0	999.0	999.0	70.6	65.2	999.0	66.2	61.8	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341602	999.0	30.0	37.0	999.0	46.2	35.2	999.0	999.0	999.0	999.0	70.6	65.2	999.0	66.2	61.8	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341702	999.0	37.0	37.0	999.0	43.1	43.1	999.0	999.0	999.0	999.0	80.3	53.5	999.0	74.6	54.3	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341702	999.0	37.0	37.0	999.0	43.1	43.1	999.0	999.0	999.0	999.0	80.3	53.5	999.0	74.6	54.3	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341702	999.0	37.0	37.0	999.0	43.1	43.1	999.0	999.0	999.0	999.0	80.3	53.5	999.0	74.6	54.3	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341802	999.0	30.0	30.0	999.0	50.6	71.5	999.0	999.0	999.0	999.0	74.5	59.0	999.0	64.2	57.4	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341802	999.0	30.0	30.0	999.0	50.6	71.5	999.0	999.0	999.0	999.0	74.5	59.0	999.0	64.2	57.4	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341802	999.0	30.0	30.0	999.0	50.6	71.5	999.0	999.0	999.0	999.0	74.5	59.0	999.0	64.2	57.4	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341802	999.0	30.0	30.0	999.0	50.6	71.5	999.0	999.0	999.0	999.0	74.5	59.0	999.0	64.2	57.4	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	99999	9.99	99999	99999	999
341902	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3500	0.89	2050	99999	0
341902	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4300	0.73	2070	99999	15
341902	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4300	0.75	2070	99999	15
341902	999.0	37.4	76.0	999.0	63.0	59.6	999.0	999.0	999.0	999.0	64.0	57.4	999.0	63.3	61.9	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1810	0.30	1130	99999	33
341902	999.0	37.4	76.0	999.0	63.0	59.6	999.0	999.0	999.0	999.0	64.0	57.4	999.0	63.3	61.9	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1570	0.30	940	99999	26
341902	999.0	70.0	70.0	999.0	74.7	58.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1460	0.27	1100	99999	8
341902	999.0	70.0	70.0	999.0	74.7	58.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1903	0.32	1190	99999	0
341902	999.0	70.0	70.0	999.0	74.7	59.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1900	0.33	1140	99999	23
342002	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1900	0.33	1140	99999	43
342002	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3320	0.36	1090	99999	37
342002	999.0	44.0	30.4	999.0	57.4	40.4	999.0	999.0	999.0	999.0	66.3	67.9	999.0	64.0	66.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3280	0.34	1080	99999	41
342102	999.0	37.4	76.0	999.0	63.0	59.6	999.0	999.0	999.0	999.0	64.0	57.4	999.0	63.3	61.9	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	2500	0.54	1730	99999	34
342102	999.0	37.4	76.0	999.0	63.0	59.6	999.0	999.0	999.0	999.0	64.0	57.4	999.0	63.3	61.9	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1910	0.42	1400	99999	46
342102	999.0	70.0	70.0	999.0	74.7	58.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1540	0.32	1100	99999	42
342102	999.0	70.0	70.0	999.0	74.7	58.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1940	0.20	910	99999	33
342102	999.0	70.0	70.0	999.0	74.7	59.5	999.0	999.0	999.0	999.0	54.1	57.0	999.0	53.5	58.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	1690	0.33	1110	99999	37
342202	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3600	0.20	1080	99999	17
342202	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3560	0.62	2010	99999	22
342202	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3990	0.60	2490	99999	15
342202	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3840	0.60	2010	99999	26
342202	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	3490	0.64	2090	99999	17
342302	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4390	0.61	2610	99999	37
342302	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4490	0.70	2970	99999	41
342302	999.0	35.0	30.0	999.0	43.5	44.1	999.0	999.0	999.0	999.0	82.0	78.0	999.0	70.0	73.0	999.0	999.0	999.0	999.0	99.0	9.90	99.0	9.99	99.0	99.0	99.0	99.0	99.0	4490	0.79	2970	99999	44

Table III-40

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 5	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
342302	2	1	66	0.375	0.50	50	82	92	95	88	83	80	73	61	75	90	92	89	84	0.87	0.88	0.86	0.81	0.76	65	79	79	72	64	99	
342302	2	1	66	0.375	0.50	53	84	95	94	84	81	96	95	72	77	91	91	86	87	0.87	0.88	0.86	0.81	0.76	67	80	78	70	66	99	
342402	2	1	66	0.375	0.50	62	81	75	65	67	64	67	67	65	73	74	69	65	66	0.76	0.78	0.80	9.99	0.71	55	58	55	999	47	99	Constant 20% slip, 80% NW veg 3" or less.
342402	2	1	66	0.375	0.50	49	86	59	75	71	67	61	65	67	65	73	68	71	66	0.76	0.78	0.80	9.99	0.71	49	57	54	999	47	99	
342402	2	1	66	0.375	0.50	59	80	69	77	78	63	65	70	69	69	75	75	73		0.76	0.78	0.80	9.99	0.71	52		60	999	43	99	
342402	2	1	66	0.375	0.50	64	95	68	70	62	53	60	65	62	76	78	67	62	58	0.81	0.78	0.80	9.99	0.71	62	61	54	999	41	99	
342402	2	1	66	0.375	0.50	69	91	78	80	69	63	64	69	68	79	83	76			0.81	0.78	0.80	9.99	0.71	64	65	61	999	41	99	
342402	2	1	66	0.375	0.50	62	81	76	79	63	61	63	68	69	73	79	73	68	62	1.00	0.80	0.80	9.99	0.71	73	63	58	999	44	99	
342402	2	1	66	0.375	0.50	59	89	75	82	67	59	77	78	73	74	82	75	69	68	1.00	0.80	0.88	9.99	0.71	74	60	60	999	48	99	
342902	2	1	66	0.375	0.50	62	81	75	65	67	64	67	67	65	73	74	69	65	66	0.76	0.78	0.80	0.75	0.71	55	58	55	49	4	99	Constant 40% slip, 80% NW veg 3" or less; use soil data from test 424
342902	2	1	66	0.375	0.50	49	86	59	75	71	67	61	65	67	65	73	68	71	66	0.76	0.78	0.88	0.75	0.71	49	57	54	53	47	99	
342902	2	1	66	0.375	0.50	59	80	69	77	78	63	65	70	69	69	75	75	73		0.76	0.78	0.88	0.75	0.71	52	58	68	55		99	
342502	2	1	66	0.375	0.50	64	95	68	70	62	53	60	65	62	76	78	67	62	58	0.81	0.78	0.88	0.75	0.71	62	61	54		41	99	
342502	2	1	66	0.375	0.50	69	91	78	80	69	63	64	69	68	79	83	76			0.81	0.78	0.88	0.75	0.71	64	65	61	50	46	99	
342502	2	1	66	0.375	0.50	62	81	76	79	63	61	63	68	69	73	79	73	68	62	0.91	0.78	0.88	0.75	0.71	66	62	58	51	44	99	
342502	2	1	66	0.375	0.50	59	89	75	82	67	59	77	78	73	74	82	75	69	68	0.91	0.78	0.88	0.75	0.71	67	64	68	52	48	99	
342802	2	1	66	0.375	0.50	39	44	47	62	61	51	32	61	56	43	51	57	58	48	0.84	0.66	0.66	0.73	0.88	36	34	38	42	38	99	Constant 20% slip; 90% NW veg 3" or less.
342802	2	1	66	0.375	0.50	55	52	43	60	63	60	65	66	61	58	52	59	61	63	0.84	0.55	0.66	0.73	0.88	42	34	36	44	50	99	
342802	2	1	66	0.375	0.50	46	51	42	59	55	35	57	38	56	46	49	51	43	49	0.75	0.73	0.66	0.73	0.88	34	35	34	35	39	99	
342802	2	1	66	0.375	0.50	34	47	47	57	62	58	62	59	59	43	58	55	39	41	0.75	0.73	0.66	0.73	0.88	32	36	36	43	44	99	
342802	2	1	66	0.375	0.50	48	49	41	55	54	53	65	61	59	46	48	58	54		0.78	0.71	0.66	0.73	0.88	36	34	33	39	46	99	
342802	2	1	66	0.375	0.50	47	31	49	54	91	1	94	56	53	42	45	51	2	52	0.81	0.69	0.66	0.73	0.88	34	31	34	38	42	99	
342902	2	1	66	0.375	0.50	39	44	47	62	61	51	32	61	56	43	51	57	3	48	0.84	0.66	0.66	0.73	0.88	36	34	38	42	38	99	Constant 40% slip; 90% NW veg 3" or less; use soil data from test 428.
342902	2	1	66	0.375	0.50	55	52	43	60	63	60	65	66	61	58	52	59	61	3	0.84	0.66	0.66	0.73	0.88	42	34	36	44	50	99	
342902	2	1	66	0.375	0.50	46	51	42	59	55	35	57	38	56	46	49	51	48	49	0.75	0.71	0.66	0.73	0.88	34	34	34	35	39	99	
343002	3	1	66	0.375	0.50	36	38	31	33	48	48	47	43	46	35	34	37	43	48	0.69	0.64	0.68	0.57	0.40	24	22	25	24	22	0	90% NW veg; area mowed
343002	3	1	66	0.375	0.50	33	35	22	32	46	43	42	39	44	32	32	35	48	44	0.69	0.60	0.68	9.99	9.99	22	19	24	999	999	0	
343002	3	1	66	0.375	0.50	35	37	20	33	47	44	40	41	38	33	33	36	41	44	0.69	0.71	0.68	9.99	9.99	23	23	24	999	999	0	
343002	3	1	66	0.375	0.50	31	42	29	33	49	40	52	45	49	34	35	37	41	47	0.69	0.65	0.68	9.99	9.99	23	23	25	999	999	0	
343182	4	1	76	0.375	0.50	36	38	31	33	48	48	47	43	46	35	34	37	43	48	0.69	0.64	0.68	0.57	0.40	24	22	25	24	22	0	Use soil data from test 430 See table 47
343182	4	1	76	0.375	0.50	33	35	20	32	46	43	42	39	44	32	32	35	48	44	0.69	0.64	0.68	0.57	0.40	22	20	24	23	20	0	See table 47.
343182	4	1	76	0.375	0.50	35	37	20	33	47	44	40	41	38	33	33	36	41	44	0.69	0.75	0.68	0.57	0.40	23	2	24	23	20	0	" " "
343182	4	1	76	0.375	0.50	31	42	29	33	49	40	52	45	49	34	35	37	41	47	0.69	0.65	0.68	0.57	0.40	23	23	25	23	22	0	" " "
343182	4	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	0	" " "
343802	3	1	66	0.375	0.50	36	54	42	38	40	54	53	48	48	51	45	43	47	92	0.82	0.67	0.71	0.69	0.67	42	38	38	32	39	0	30% NW veg
343802	3	1	66	0.375	0.50	34	52	41	36	50	40	46	45	57	49	43	42	45	49	0.82	0.69	0.71	9.99	9.99	40	38	38	999	999	0	
343802	3	1	66	0.375	0.50	54	56	46	38	56	54	58	57	60	52	46	46	49	56	0.81	0.71	0.71	9.99	9.99	42	33	33	999	999	0	
343802	3	1	66	0.375	0.50	53	54	42	40	50	51	57	53	57	56	49	47	50	95	0.81	0.69	0.71	9.99	9.99	40	31	33	999	999	0	
343302	3	1	58	0.375	0.50	40	55	52	53	67	78	78	67	62	49	53	57	66	2	0.75	0.76	0.63	0.74	0.85	37	40	36	49	61	0	50% NW veg area mowed.
343302	3	1	58	0.375	0.50	41	48	48	50	58	73	73	73	64	45	49	52	61	69	0.75	0.79	0.63	9.99	9.99	34	38	33	999	999	0	
343302	3	1	58	0.375	0.50	36	43	48	51	62	75	76	72	72	44	48	54	63	71	0.79	0.79	0.63	9.99	9.99	33	39	34	999	999	0	
343302	3	1	58	0.375	0.50	39	51	52	57	97	78	72	78	64	47	53	55	61	66	0.75	0.76	0.63	9.99	9.99	39	40	35	999	999	0	
343402	3	1	58	0.375	0.50	37	47	39	42	54	57	52	54	56	41	43	45	91	54	0.69	0.74	0.87	0.84	0.82	28	32	39	43	44	0	90% NW 3" or less; area not mowed.
343402	3	1	58	0.375	0.50	39	40	42	44	56	54	44	52	57	43	43	46	50	91	0.69	0.74	0.87	9.99	9.99	38	32	40	999	999	0	
343402	3	1	58	0.375	0.50	40	47	42	42	55	55	51	47	58	43	44	46	51	54	0.69	0.76	0.87	9.99	9.99	30	33	40	999	999	0	
343402	3	1	58	0.375	0.50	42	53	49	42	51	40	58	52	51	48	46	47	47	96	0.69	0.76	0.87	9.99	9.99	33	36	41	999	999	0	
343402	2	1	58	0.375	0.50	34	47	48	38	42	48	51	46	37	40	42	44	44	47	0.66	0.70	0.71	0.67	0.63	29	29	28	29	30	0	Constant 40% slip; 90% NW veg 3' or less; test may be effected by tall grass.
343902	2	1	78	0.375	0.50	15	25	22	20	27	33	36	33	31	21	22	23	27	32	0.63	0.71	0.53	0.65	0.80	13	16	12	18	22	0	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	G	G/R
342302	999.0	35.2	39.8	999.0	40.5	44.1	999.0	999.0	999.0	999.0	82.8	78.6	999.0	78.9	73.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4470	0.75	2820	99999
342302	999.0	35.2	39.8	999.0	40.5	44.1	999.0	999.0	999.0	999.0	82.8	78.6	999.0	78.9	73.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4420	0.74	2810	99999
342402	999.0	25.4	41.8	999.0	38.4	40.3	999.0	999.0	999.0	999.0	68.5	75.8	999.0	75.8	72.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3800	0.64	2300	99999
342402	999.0	25.4	41.8	999.0	38.4	40.3	999.0	999.0	999.0	999.0	68.5	75.8	999.0	75.8	72.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3710	0.62	2350	99999
342402	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3930	0.59	2190	99999
342402	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3040	0.51	2020	99999
342402	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3120	0.52	2060	99999
342402	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3950	0.66	2480	99999
342402	999.0	31.7	39.9	999.0	38.2	46.1	999.0	999.0	999.0	999.0	71.8	78.9	999.0	81.1	73.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3750	0.63	2320	99999
342902	999.0	25.4	41.8	999.0	38.4	40.3	999.0	999.0	999.0	999.0	68.5	75.8	999.0	75.8	72.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4520	0.76	2660	99999
342902	999.0	25.4	41.8	999.0	38.4	40.3	999.0	999.0	999.0	999.0	68.5	75.8	999.0	75.8	72.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4450	0.75	2710	99999
342902	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4710	0.79	2770	99999
342502	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4620	0.78	2680	99999
342502	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4760	0.81	2650	99999
342502	999.0	26.0	42.1	999.0	35.5	45.0	999.0	999.0	999.0	999.0	71.6	76.6	999.0	79.6	73.6	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999
342502	999.0	31.7	39.9	999.0	38.2	46.1	999.0	999.0	999.0	999.0	71.8	78.9	999.0	81.1	73.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999
342802	999.0	45.3	55.5	999.0	51.0	50.7	999.0	999.0	999.0	999.0	78.3	65.3	999.0	71.9	59.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3600	0.60	2290	99999
342802	999.0	45.3	55.5	999.0	51.0	50.7	999.0	999.0	999.0	999.0	78.3	65.3	999.0	71.9	59.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4000	0.67	2640	99999
342802	999.0	46.6	49.5	999.0	49.9	57.3	999.0	999.0	999.0	999.0	78.2	67.4	999.0	69.6	64.3	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3900	0.65	2300	99999
342802	999.0	46.6	49.5	999.0	49.9	57.3	999.0	999.0	999.0	999.0	78.2	67.4	999.0	69.6	64.3	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3600	0.62	2200	99999
342802	999.0	46.6	49.5	999.0	49.9	57.3	999.0	999.0	999.0	999.0	78.2	67.4	999.0	69.6	64.3	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3950	0.66	2420	99999
342802	999.0	46.6	49.5	999.0	49.9	57.3	999.0	999.0	999.0	999.0	78.2	67.4	999.0	69.6	64.3	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	4050	0.68	2420	99999
342902	999.0	45.3	55.5	999.0	51.0	50.7	999.0	999.0	999.0	999.0	78.3	65.3	999.0	71.9	59.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3900	0.66	2240	99999
342902	999.0	45.3	55.5	999.0	51.0	50.7	999.0	999.0	999.0	999.0	78.3	65.3	999.0	71.9	59.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3600	0.64	2320	99999
342902	999.0	45.3	55.5	999.0	51.0	50.7	999.0	999.0	999.0	999.0	78.3	65.3	999.0	71.9	59.4	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	3600	0.6	2410	99999
343002	999.0	40.3	50.7	999.0	34.1	47.3	999.0	999.0	999.0	999.0	73.7	63.9	999.0	66.5	72.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	1570	99999
343002	999.0	40.3	50.7	999.0	34.1	47.3	999.0	999.0	999.0	999.0	73.7	63.9	999.0	66.5	72.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	820	99999
343002	999.0	40.3	50.7	999.0	34.1	47.3	999.0	999.0	999.0	999.0	73.7	63.9	999.0	66.5	72.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	780	99999
343002	999.0	40.3	50.7	999.0	34.1	47.3	999.0	999.0	999.0	999.0	73.7	63.9	999.0	66.5	72.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	340	99999
343182	999.0	40.8	52.3	999.0	53.7	41.7	999.0	999.0	999.0	999.0	72.7	67.5	999.0	66.5	64.7	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999
343182	999.0	40.8	52.3	999.0	53.7	41.7	999.0	999.0	999.0	999.0	72.7	67.5	999.0	66.5	64.7	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999
343182	999.0	40.8	52.3	999.0	53.7	41.7	999.0	999.0	999.0	999.0	72.7	67.5	999.0	66.5	64.7	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999
343182	999.0	40.8	52.3	999.0	53.7	41.7	999.0	999.0	999.0	999.0	72.7	67.5	999.0	66.5	64.7	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999
343182	999.0	40.8	52.3	999.0	53.7	41.7	999.0	999.0	999.0	999.0	72.7	67.5	999.0	66.5	64.7	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999
343802	999.0	43.0	51.0	999.0	55.2	54.0	999.0	999.0	999.0	999.0	94.8	73.6	999.0	66.3	66.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	895	99999
343802	999.0	43.0	51.0	999.0	55.2	54.0	999.0	999.0	999.0	999.0	94.8	73.6	999.0	66.3	66.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	580	99999
343802	999.0	43.0	51.0	999.0	55.2	54.0	999.0	999.0	999.0	999.0	94.8	73.6	999.0	66.3	66.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	515	99999
343802	999.0	43.0	51.0	999.0	55.2	54.0	999.0	999.0	999.0	999.0	94.8	73.6	999.0	66.3	66.0	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	15.0	99999	9.99	395	99999
343302	999.0	48.3	46.8	999.0	40.5	42.7	999.0	999.0	999.0	999.0	70.4	67.5	999.0	72.4	70.4	999.0	999.0	999.0	999.0	2.2	1.42	1.2	1.95	3.0	3.0	12.0	12.0	24.0	99999	9.99	6450	99999
343302	999.0	48.3	46.8	999.0	40.5	42.7	999.0	999.0	999.0	999.0	70.4	67.5	999.0	72.4	70.4	999.0	999.0	999.0	999.0	2.2	1.42	1.2	1.95	2.9	2.9	12.5	12.0	24.0	99999	9.99	4175	99999
343302	999.0	41.0	44.1	999.0	46.9	42.9	999.0	999.0	999.0	999.0	73.0	67.0	999.0	81.8	75.7	999.0	999.0	999.0	999.0	2.2	1.42	1.2	1.95	3.3	3.3	12.0	12.0	24.0	99999	9.99	5900	99999
343302	999.0	43.7	47.7	999.0	49.7	49.2	999.0	999.0	999.0	999.0	74.6	67.6	999.0	79.9	76.7	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	4.0	4.0	12.0	12.0	24.0	99999	9.99	3300	99999
343402	999.0	47.4	53.7	999.0	32.0	45.2	999.0	999.0	999.0	999.0	74.0	67.1	999.0	63.6	77.0	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	3.0	3.0	14.0	14.0	99.9	99999	9.99	4600	99999
343402	999.0	47.4	53.7	999.0	32.0	45.2	999.0	999.0	999.0	999.0	74.0	67.1	999.0	63.6	77.0	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	3.6	3.6	15.0	15.0	99.9	99999	9.99	6160	99999
343402	999.0	47.4	53.7	999.0	38.0	52.0	999.0	999.0	999.0	999.0	74.8	64.1	999.0	65.2	71.6	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	3.8	3.0	13.0	13.0	99.9	99999	9.99	4620	99999
343402	999.0	47.4	53.7	999.0	30.0	52.0	999.0	999.0	999.0	999.0	74.8	64.1	999.0	65.2	71.6	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	4.5	4.5	13.0	13.0	99.9	99999	9.99	3640	99999
343402	999.0	41.8	46.1	999.0	36.1	45.3	999.0	999.0	999.0	999.0	70.0	72.2	999.0	65.2	71.1	999.0	999.0	999.0	999.0	0.4	0.05	0.0	1.02	99.9	99.9	99.9	99.9	23.0	4200	0.72	2080	99999
343902	999.0	92.5	63.1	999.0	67.0	53.3	999.0	999.0	999.0	999.0	68.2	60.0	999.0	99.0	67.3	999.0	999.0	999.0	999.0	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	1000	0.32	1200	99999

Table III-41

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	PENETROMETER TYPE: CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24
343902	2	1	70	0.375	0.50	42	43	42	39	37	48	54	53	58
343902	2	1	70	0.375	0.50	16	23	21	22	27	33	30	31	29
343902	2	1	70	0.375	0.50	39	41	38	33	34	46	49	48	55
343902	2	1	70	0.375	0.50	32	40	32	28	34	48	49	51	59
343902	2	1	70	0.375	0.50	31	37	26	25	32	41	41	43	46
343902	2	1	70	0.375	0.50	32	36	26	26	34	45	43	44	43
343902	2	1	70	0.375	0.50	29	25	24	26	35	43	49	40	47
343902	2	1	70	0.375	0.50	28	32	23	28	34	30	43	42	48
343902	2	1	70	0.375	0.50	18	28	19	21	31	32	48	38	36
343602	2	1	70	0.375	0.50	44	47	48	38	42	49	51	40	37
343602	2	1	70	0.375	0.50	15	29	22	20	27	33	36	33	31
343602	2	1	70	0.375	0.50	42	43	42	39	37	48	54	53	58
343602	2	1	70	0.375	0.50	16	23	21	22	27	33	39	31	29
343602	2	1	70	0.375	0.50	39	41	38	33	34	46	49	48	55
343602	2	1	70	0.375	0.50	32	48	32	28	34	48	49	51	59
343602	2	1	70	0.375	0.50	31	37	20	29	32	41	41	43	46
343602	2	1	70	0.375	0.50	32	36	26	26	34	45	43	44	43
343602	2	1	70	0.375	0.50	29	29	24	26	35	43	49	40	47
343602	2	1	70	0.375	0.50	28	32	23	28	34	39	43	42	48
343602	2	1	70	0.375	0.50	18	28	19	21	31	32	48	38	36
343700	2	1	70	0.375	0.50	42	44	41	43	49	58	64	78	76
343700	2	1	70	0.375	0.50	42	44	44	44	52	70	69	60	77
343800	2	1	70	0.375	0.50	42	44	41	43	49	58	63	70	76
343800	2	1	70	0.375	0.50	42	44	41	44	52	70	69	60	77
343903	2	1	70	0.375	0.50	38	69	84	88	69	63	63	68	65
343903	2	1	70	0.375	0.50	44	70	82	83	65	61	61	80	63
343903	2	1	70	0.375	0.50	42	75	98	77	99	52	58	59	62
343903	2	1	70	0.375	0.50	39	62	114	80	47	40	35	32	35
343903	2	1	70	0.375	0.50	43	66	90	53	35	33	34	27	35
343903	2	1	70	0.375	0.50	44	57	91	42	33	29	38	30	40
343903	2	1	70	0.375	0.50	49	45	48	47	36	39	30	29	31
343903	2	1	70	0.375	0.50	36	28	38	38	35	37	38	31	29
343903	2	1	70	0.375	0.50	28	26	38	43	34	32	27	28	24
344003	2	1	70	0.375	0.50	38	69	84	88	69	63	63	68	65
344003	2	1	70	0.375	0.50	44	70	82	83	65	61	61	80	63
344003	2	1	70	0.375	0.50	42	75	98	77	99	52	58	59	62
344003	2	1	70	0.375	0.50	39	62	114	80	47	40	35	32	35
344003	2	1	70	0.375	0.50	43	66	90	53	35	[illegible]	[illegible]	27	35
344003	2	1	70	0.375	0.50	44	57	91	42	33	29	38	30	40
344003	2	1	70	0.375	0.50	49	45	48	47	36	39	30	29	31
344003	2	1	70	0.375	0.50	36	28	38	38	35	37	38	31	29
344003	2	1	70	0.375	0.50	28	26	38	43	34	32	27	28	24
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82
344102	2	1	70	0.375	0.50	46	70	88	84	72	67	74	82	82

LOC. TEST AND AREA	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	PI 0-6	PI 3-9	PI 6-12	PI 9-15	PI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
343902	42	41	39	41	[illegible]	0.06	0.70	0.71	0.07	0.04	28	29	28	27	23		
343902	20	22	23	27	33	0.03	0.71	0.53	0.05	0.08	13	10	12	18	22	[illegible]	
343902	39	37	35	38	43	0.06	0.71	0.71	0.08	0.05	26	26	25	23	28	[illegible]	
343902	35	33	31	37	44	0.06	0.71	0.71	0.05	0.07	23	23	22	24	29	[illegible]	
343902	31	29	28	[illegible]	38	0.03	0.69	0.53	0.05	0.07	28	20	15	21	25	99	
343902	31	29	[illegible]	[illegible]	41	0.03	0.69	0.53	0.05	0.07	20	20	15	23	27	99	
343902	29	29	28	35	42	0.03	0.69	0.53	0.05	0.07	18	17	15	23	20	99	
343902	28	29	26	31	39	0.03	0.70	0.53	0.05	0.07	18	18	14	20	26	99	
343902	22	23	24	28	34	0.03	0.70	0.53	0.05	0.07	14	10	13	18	23	99	
343602	44	42	40	43	47	0.06	0.70	0.71	0.07	0.03	29	29	28	29	38	99	Constant 20% slip; parallel to test 435; use same soil data.
343602	21	22	23	27	32	0.03	0.71	0.53	0.05	0.08	13	10	12	18	22	99	
343602	42	41	39	41	45	0.06	0.70	0.71	0.07	0.03	28	29	28	27	28	99	
343602	20	22	23	27	33	0.03	0.71	0.53	0.05	0.08	13	10	12	18	22	99	
343602	39	37	38	38	43	0.06	0.71	0.71	0.07	0.04	26	26	25	27	28	99	
343602	39	33	31	37	44	0.06	0.71	0.71	0.08	0.05	23	23	22	25	29	99	
343602	31	29	28	33	38	0.03	0.69	0.53	0.05	0.06	28	20	15	21	25	99	
343602	31	29	29	33	41	0.03	0.69	0.53	0.05	0.07	20	20	15	23	27	99	
343602	29	29	28	35	42	0.03	0.69	0.53	0.05	0.07	18	17	15	23	20	99	
343602	28	29	26	31	39	0.03	0.70	0.53	0.05	0.07	18	18	14	20	26	99	
343602	22	23	24	28	34	0.03	0.70	0.53	0.05	0.07	14	18	13	18	23	99	
343700	42	42	44	50	57	0.04	0.6	0.82	0.75	0.08	35	32	36	38	37	99	40% constant slip; 10% MW 6" or less (weed, stubbles after mowing)
343700	43	44	47	55	64	0.04	0.8	0.82	0.75	0.08	36	34	38	41	44	99	
343800	42	42	44	50	[illegible]	0.04	0.6	0.82	0.75	0.08	35	32	36	38	39	99	20% constant slip; parallel to test 437; use same soil data
343800	43	44	47	55	64	0.04	0.8	0.82	0.75	0.08	36	34	38	41	44	99	
343903	64	70	78	71	6	0.96	0.54	0.93	9.99	9.99	61	48	72	999	999	99	40% constant slip; 70% MW veg 6" or less.
343903	65	70	77	70	62	0.96	0.54	0.93	9.99	9.99	62	48	72	999	999	99	
343903	72	83	78	63	56	0.96	0.52	0.93	0.85	0.77	60	43	72	54	43	99	
343903	72	85	88	56	41	0.96	0.52	0.93	9.99	9.99	60	44	74	999	999	99	
343903	67	70	59	48	34	0.96	0.52	0.93	9.99	9.99	64	36	95	999	999	99	
343903	51	58	42	35	31	0.96	0.70	0.93	9.99	9.99	49	38	39	999	999	99	
343903	46	46	43	41	35	0.96	0.70	0.93	9.99	9.99	44	35	40	999	999	99	
343903	34	35	37	37	34	0.96	0.77	0.93	9.99	9.99	33	27	34	999	999	99	
343903	38	35	38	36	31	0.96	0.77	0.93	9.99	9.99	29	27	35	999	999	99	
344003	64	70	78	71	65	0.96	0.94	0.93	9.99	0.77	61	42	72	999	98	99	20% constant slip; parallel to test 439; use same soil data
344003	65	70	77	70	62	0.96	0.94	0.93	9.99	0.77	62	42	72	999	48	99	
344003	72	83	78	63	56	0.96	0.52	0.93	9.99	0.77	60	43	73	999	43	99	
344003	72	85	88	56	41	0.96	0.52	0.93	9.99	0.77	60	44	74	999	32	99	
344003	67	70	59	48	34	0.96	0.52	0.93	9.99	0.77	64	36	95	999	30	99	
344003	51	58	42	35	31	0.96	0.76	0.93	9.99	0.77	49	38	39	999	24	99	
344003	46	46	43	41	35	0.96	0.76	0.93	9.99	0.77	44	35	40	999	26	99	
344003	34	35	37	37	34	0.96	0.77	0.93	9.99	0.77	33	27	34	999	20	99	
344003	38	35	38	36	31	0.96	0.7	0.93	9.99	0.77	29	27	35	999	27	99	
344102	65	70	79	4	71	0.04	0.88	0.84	9.99	0.70	95	62	66	999	95	99	40% constant slip; 80% MW veg 4" or less
344102	65	70	79	4	71	0.04	0.88	0.84	9.99	0.70	95	62	66	999	95	99	
344102	65	70	79	4	71	0.04	0.88	0.84	9.99	0.70	95	62	66	999	95	99	
344102	65	70	79	4	71	0.04	0.70	0.84	9.99	0.70	95	59	66	999	95	99	
344102	65	70	79	4	71	0.04	0.70	0.84	9.99	0.70	95	59	66	999	95	99	
344102	65	70	79	4	71	0.04	0.70	0.84	9.99	0.70	95	59	66	999	95	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12
343902	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343902	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343902	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343902	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343902	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343902	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343902	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343902	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343902	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343602	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343602	999.9	41.8	46.1	999.9	58.4	45.2	999.9	999.9	999.9	999.9	76.0	72.2	999.9	71.1	73.4
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343602	999.9	52.5	63.1	999.9	67.8	53.3	999.9	999.9	999.9	999.9	68.2	68.9	999.9	59.8	67.3
343700	999.9	38.6	40.4	999.9	43.2	49.8	999.9	999.9	999.9	999.9	74.6	60.7	999.9	69.9	49.2
343700	999.9	41.9	52.7	999.9	40.9	47.4	999.9	999.9	999.9	999.9	68.9	61.7	999.9	69.4	68.4
343800	999.9	38.6	40.4	999.9	43.2	49.8	999.9	999.9	999.9	999.9	74.6	60.7	999.9	69.9	49.2
343800	999.9	41.9	52.7	999.9	40.9	47.4	999.9	999.9	999.9	999.9	68.9	61.7	999.9	69.4	68.4
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
343903	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344003	999.9	37.4	37.8	999.9	48.9	45.1	999.9	999.9	999.9	999.9	88.7	73.9	999.9	70.1	72.9
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4
344102	999.9	36.7	38.8	999.9	44.9	49.7	999.9	999.9	999.9	999.9	84.2	74.5	999.9	75.8	70.4

LOC. TEST AND AREA	DENSITY 6-12	DENSITY 12-15	DENSITY 15-18	DENSITY 12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	B	B/R	SLIP PCNT
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	4000	0.67	2450	99999	40
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	1660	0.28	1220	99999	39
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	3400	0.57	2890	99999	37
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	3110	0.52	2070	99999	29
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	3510	0.59	2280	99999	39
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	3490	0.58	2150	99999	34
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	3300	0.55	2090	99999	30
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	3300	0.55	2120	99999	36
343902	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2900	0.49	1820	99999	43
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	3690	0.62	2110	99999	16
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2790	0.46	1650	99999	20
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	2200	0.38	1050	99999	22
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2000	0.34	1320	99999	33
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	2000	0.34	1490	99999	27
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	2510	0.42	1700	99999	7
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	23.0	2600	0.44	1810	99999	23
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	3290	0.55	2120	99999	23
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2790	0.46	1920	99999	18
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2800	0.47	1980	99999	26
343602	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	18.0	2590	0.43	1700	99999	29
343700	999.9	999.9	999.9	999.9	0.0	0.62	0.0	0.73	99.9	99.9	99.9	99.9	24.0	4597	0.77	2890	99999	999
343700	999.9	999.9	999.9	999.9	0.0	0.62	0.0	0.73	99.9	99.9	99.9	99.9	24.0	4763	0.80	3000	99999	999
343800	999.9	999.9	999.9	999.9	0.0	0.62	0.0	0.73	99.9	99.9	99.9	99.9	24.0	3808	0.64	2790	99999	19
343800	999.9	999.9	999.9	999.9	0.0	0.62	0.0	0.73	99.9	99.9	99.9	99.9	24.0	3700	0.62	2590	99999	23
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4500	0.76	2706	99999	38
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4500	0.76	2706	99999	999
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4600	0.77	2023	99999	44
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4600	0.77	2041	99999	40
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4500	0.77	2953	99999	40
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4300	0.73	2767	99999	44
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3620	0.61	2220	99999	26
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3120	0.52	2601	99999	98
343903	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3120	0.52	2001	99999	40
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4245	0.71	2002	99999	24
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4325	0.73	2640	99999	19
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4150	0.70	2000	99999	19
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	4220	0.71	2659	99999	26
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3800	0.64	2409	99999	32
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3830	0.64	2393	99999	17
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3910	0.66	2412	99999	23
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	3225	0.54	2070	99999	29
344003	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	24.0	2700	0.45	1709	99999	30
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	4990	0.84	2000	99999	39
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	5110	0.86	2090	99999	39
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	4990	0.84	2900	99999	40
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	5100	0.86	2000	99999	40
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	5020	0.84	2061	99999	30
344102	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.65	99.9	99.9	99.9	99.9	99.9	5060	0.85	2020	99999	44

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 3	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
344202	2	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.80	0.84	9.99	0.70	99	62	66	999	99	99	Constant 20% slip; parallel to test 441; use same soil data.
344202	2	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.80	0.84	9.99	0.70	99	62	66	999	99	99	
344202	2	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	
344202	2	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	
344202	2	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.77	0.84	9.99	0.70	99	60	66	999	99	99	Use soil data from test 441. See table 47
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.77	0.84	9.99	0.70	99	60	66	999	99	99	See table 47.
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.77	0.84	9.99	0.70	99	60	66	999	99	99	" " "
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	" " "
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	" " "
344302	4	1	78	0.375	0.50	46	70	80	84	72	67	74	82	82	65	78	79	74	71	0.84	0.70	0.84	9.99	0.70	99	59	66	999	99	99	" " "
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	" " "
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	" " " ; Use soil data from test 441.
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	" " "
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	" " "
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	" " "
344402	4	1	78	0.375	0.50	40	91	47	90	62	60	97	90	97	49	49	53	57	60	0.96	0.70	0.70	9.99	9.99	47	37	40	999	999	99	
344502	4	1	78	0.375	0.50	30	30	30	31	47	53	90	90	91	36	33	36	44	90	0.97	0.72	0.90	9.99	9.99	21	24	18	999	999	99	Heavy grass mat See Table 47
344502	4	1	78	0.375	0.50	30	30	30	31	47	53	90	90	91	36	33	36	44	90	0.97	0.72	0.90	9.99	9.99	21	24	18	999	999	99	See table 47.
344502	4	1	78	0.375	0.50	30	30	30	31	47	53	90	90	91	36	33	36	44	90	0.97	0.72	0.90	9.99	9.99	21	24	18	999	999	99	" " "
344502	4	1	78	0.375	0.50	30	30	30	31	47	53	90	90	91	36	33	36	44	90	0.97	0.72	0.90	9.99	9.99	21	24	18	999	999	99	" " "
344502	4	1	78	0.375	0.50	30	30	30	31	47	53	90	90	91	36	33	36	44	90	0.97	0.72	0.90	9.99	9.99	21	24	18	999	999	99	" " "
344602	4	1	78	0.375	0.50	44	40	39	43	96	94	96	97	99	44	43	46	91	95	0.67	0.72	0.65	9.99	9.99	20	31	30	999	999	99	" " " ; heavy grass mat.
344602	4	1	78	0.375	0.50	44	40	39	43	96	94	96	97	99	44	43	46	91	95	0.67	0.72	0.65	9.99	9.99	20	31	30	999	999	99	" " "
344602	4	1	78	0.375	0.50	44	40	39	43	96	94	96	97	99	44	43	46	91	95	0.67	0.72	0.65	9.99	9.99	20	31	30	999	999	99	" " "
344602	4	1	78	0.375	0.50	44	40	39	43	96	94	96	97	99	44	43	46	91	95	0.67	0.72	0.65	9.99	9.99	20	31	30	999	999	99	" " "
344602	4	1	78	0.375	0.50	44	40	39	43	96	94	96	97	99	44	43	46	91	95	0.67	0.72	0.65	9.99	9.99	20	31	30	999	999	99	
344704	1	2	94	0.375	0.50	4	15	18	23	21	26	29	20	24	11	10	20	23	24	0.41	0.81	0.90	0.98	0.96	4	9	10	12	13	0	100% slip due to sinkage; dragging on 8th pass; extreme difficulty on 35th pass; no tilt; no veg
[illegible]	1	2	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
[illegible]	1	2	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
[illegible]	1	2	94	0.375	0.50	4	12	11	12	14	17	21	24	24	9	12	12	14	17	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	44	
[illegible]	1	2	94	0.375	0.50	2	17	18	16	19	20	27	22	22	12	17	18	21	20	0.01	0.04	0.90	0.94	0.93	7	11	10	13	16	0	100% slip due to sinkage; dragging on 9th pass; extreme difficulty on 30th pass; no tilt; no veg.
[illegible]	1	2	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
[illegible]	1	2	94	0.375	0.50	3	13	15	12	11	15	19	22	24	10	11	13	13	15	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	40	
[illegible]	1	2	94	0.375	0.50	1	10	15	13	13	15	20	22	21	11	15	14	14	17	9.99	0.08	0.94	0.98	0.90	6	8	8	7	8	0	100% slip due to sinkage; dragging on 5th pass; no veg
[illegible]	1	2	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
[illegible]	1	2	94	0.375	0.50	3	7	10	15	15	17	18	24	26	7	11	13	10	17	9.90	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
[illegible]	1	2	94	0.375	0.50	2	21	10	15	14	16	27	20	27	14	10	10	15	19	0.74	0.56	0.90	0.61	0.64	10	10	9	9	12	0	100% slip due to sinkage; dragging on 4th pass; no veg
[illegible]	1	2	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
[illegible]	1	2	94	0.375	0.50	4	0	15	10	20	21	24	20	31	10	14	18	20	22	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
[illegible]	3	2	78	0.375	0.50	47	37	36	31	37	36	37	37	35	31	32	46	41	37	0.03	0.64	0.79	0.79	0.78	40	33	34	31	30	0	100% NW veg; area mowed
[illegible]	3	2	78	0.375	0.50	32	35	32	30	40	44	46	50	35	33	35	33	50	46	0.03	0.62	0.79	0.79	0.79	44	34	40	30	34	0	
[illegible]	3	2	78	0.375	0.50	37	50	39	39	45	45	47	40	40	37	36	32	40	40	0.03	0.62	0.79	0.79	0.79	47	30	30	36	34	0	
[illegible]	3	2	78	0.375	0.50	37	37	39	30	41	44	46	50	33	36	34	40	45	44	0.03	0.80	0.79	0.79	0.79	44	31	36	34	33	0	
[illegible]	3	2	78	0.375	0.50	67	81	64	40	40	32	37	61	60	71	65	54	40	00	0.00	0.01	0.79	0.79	0.73	40	33	48	37	30	0	100% NW veg; area mowed & raked
[illegible]	3	2	78	0.375	0.50	86	81	64	32	36	39	39	62	54	71	65	59	92	50	0.00	0.79	0.79	0.79	0.73	34	30	40	40	40	0	
[illegible]	3	2	78	0.375	0.50	68	86	76	30	47	53	36	60	60	73	69	36	30	32	0.00	0.78	0.79	0.79	0.73	33	03	34	30	30	0	
[illegible]	3	2	78	0.375	0.50	30	00	64	30	44	30	36	39	36	70	77	53	40	54	0.00	0.79	0.70	0.70	0.73	40	61	40	30	30	0	

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	D/W	G	G/R	SLIP PCNT
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.69	99.9	99.9	99.9	99.9	99.9	4000	0.80	2280	99999	17
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.69	99.9	99.9	99.9	99.9	99.9	4700	0.79	2220	99999	24
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.69	99.9	99.9	99.9	99.9	99.9	4050	0.81	2300	99999	23
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.69	99.9	99.9	99.9	99.9	99.9	4070	0.70	2231	99999	18
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	0.0	0.70	0.0	0.60	99.9	99.9	99.9	99.9	99.9	4000	0.77	2001	99999	18
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	36.1	30.8	999.9	44.9	40.7	999.9	999.9	999.9	999.9	79.5	88.4	999.9	74.4	68.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	43.6	93.1	999.9	92.0	97.2	999.9	999.9	999.9	999.9	74.0	60.9	999.9	70.8	94.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	34.9	36.6	999.9	54.3	40.2	999.9	999.9	999.9	999.9	67.0	69.5	999.9	68.6	70.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
[illegible]	999.9	34.9	36.6	999.9	54.3	40.2	999.9	999.9	999.9	999.9	67.0	69.5	999.9	68.6	70.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
[illegible]	999.9	34.9	36.6	999.9	54.3	40.2	999.9	999.9	999.9	999.9	67.0	69.5	999.9	68.6	70.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
[illegible]	999.9	34.9	36.6	999.9	54.3	40.2	999.9	999.9	999.9	999.9	67.0	69.5	999.9	68.6	70.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
[illegible]	999.9	34.9	36.6	999.9	54.3	40.2	999.9	999.9	999.9	999.9	67.0	69.5	999.9	68.6	70.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	14.0	99999	9.99	99999	99999	999
[illegible]	999.9	37.3	38.3	999.9	46.7	40.7	999.9	999.9	999.9	999.9	71.9	69.5	999.9	71.9	69.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	999.9	37.3	38.3	999.9	46.7	40.7	999.9	999.9	999.9	999.9	71.9	69.5	999.9	71.9	69.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	999.9	37.3	38.3	999.9	46.7	40.7	999.9	999.9	999.9	999.9	71.9	69.5	999.9	71.9	69.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	999.9	37.3	38.3	999.9	46.7	40.7	999.9	999.9	999.9	999.9	71.9	69.5	999.9	71.9	69.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	999.9	37.3	38.3	999.9	46.7	40.7	999.9	999.9	999.9	999.9	71.9	69.5	999.9	71.9	69.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	999.9	71.5	61.3	999.9	51.7	68.0	999.9	999.9	999.9	999.9	57.9	61.2	999.9	66.0	63.0	999.9	999.9	999.9	999.9	2.3	0.07	99.9	9.99	99.9	99.9	99.9	99.9	6.0	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	3.5	3.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	9.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	11.0	14.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	39.2	63.0	999.9	39.3	46.5	999.9	999.9	999.9	999.9	63.0	68.3	999.9	63.2	59.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	47.9	55.3	999.9	60.0	50.0	999.9	999.9	999.9	999.9	72.0	67.2	999.9	61.1	63.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	8.0	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	9.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	20.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	39.6	64.3	999.9	64.4	40.6	999.9	999.9	999.9	999.9	62.2	61.6	999.9	59.7	71.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	20.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	18.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	999.9	40.5	42.5	999.9	53.0	62.1	999.9	999.9	999.9	999.9	70.6	70.5	999.9	66.3	61.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	370	99999	999
[illegible]	999.9	40.5	42.5	999.9	53.0	62.1	999.9	999.9	999.9	999.9	70.6	70.5	999.9	66.3	61.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	312	99999	999
[illegible]	999.9	40.5	42.5	999.9	53.0	62.1	999.9	999.9	999.9	999.9	70.6	70.5	999.9	66.3	61.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	444	99999	999
[illegible]	999.9	40.5	42.5	999.9	53.0	62.1	999.9	999.9	999.9	999.9	70.6	70.5	999.9	66.3	61.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	400	99999	999
[illegible]	999.9	32.0	40.2	999.9	51.0	60.0	999.9	999.9	999.9	999.9	60.1	69.5	999.9	69.6	60.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.3	0.3	13.0	13.0	25.0	99999	9.99	356	99999	8
[illegible]	999.9	32.0	40.2	999.9	51.0	60.0	999.9	999.9	999.9	999.9	60.1	69.5	999.9	69.6	60.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.3	0.3	13.0	13.9	25.0	99999	9.99	290	99999	1
[illegible]	999.9	32.0	40.2	999.9	51.0	60.0	999.9	999.9	999.9	999.9	60.1	69.5	999.9	69.6	60.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.3	0.3	13.9	13.9	25.0	99999	9.99	340	99999	4
[illegible]	999.9	36.0	47.9	999.9	52.2	63.7	999.9	999.9	999.9	999.9	61.4	66.0	999.9	66.0	57.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	0.2	0.2	12.0	12.6	25.0	99999	9.99	200	99999	4

Table III-43

Loc., Test and Area	Test Type	Soil Type	VCI Code No.	Penetrometer Type: Staff Size	Penetrometer Type: Cone Size	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI Avg 0-6	CI Avg 3-9	CI Avg 6-12	CI Avg 9-15	CI Avg 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	Pass No.	Remarks
[illegible]	[illegible]	2	70	0.375	0.50	41	43	37	32	44	43	41	42	42	40	37	38	40	42	0.60	0.61	0.62	0.71	0.00	27	28	24	28	34	0	100% NW veg; area mowed
[illegible]	[illegible]	2	70	0.375	0.50	39	42	39	34	45	45	45	42	37	42	38	39	41	40	0.60	0.61	0.62	0.71	0.00	27	26	24	28	30	0	
[illegible]	[illegible]	2	70	0.375	0.50	39	44	42	35	44	40	42	42	38	43	38	39	41	37	0.60	0.64	0.64	0.71	0.00	28	24	26	30	37	0	
[illegible]	[illegible]	2	70	0.375	0.50	40	43	41	31	41	51	43	41	38	41	38	37	41	45	0.60	0.64	0.64	0.71	0.00	28	24	28	29	36	0	
[illegible]	[illegible]	2	70	0.375	0.50	0	21	21	24	24	23	21	22	24	16	22	23	24	23	0.47	0.60	0.57	0.63	0.00	6	15	13	15	16	0	
[illegible]	[illegible]	2	70	0.375	0.50	7	17	18	19	18	20	21	21	22	14	18	18	19	20	0.47	0.73	0.97	0.63	0.09	7	13	10	12	14	0	
[illegible]	[illegible]	2	70	0.375	0.50	9	17	21	20	20	24	24	29	20	14	21	24	29	29	0.47	0.62	0.97	0.63	0.09	6	13	14	16	17	0	
[illegible]	[illegible]	2	70	0.375	0.50	4	17	19	24	24	22	22	25	27	13	20	22	23	23	0.47	0.61	0.97	0.63	0.09	6	18	12	14	10	0	
[illegible]	[illegible]	1	50	0.375	0.50	96	67	93	46	92	90	90	90	64	59	95	50	92	96	1.40	0.79	0.76	0.76	0.76	83	43	38	40	42	0	20% NW veg; (6" grass stubbles)
[illegible]	[illegible]	1	50	0.375	0.50	93	65	96	42	94	96	60	62	63	58	94	51	51	57	1.40	0.79	0.02	0.79	0.76	82	43	40	40	42	0	
[illegible]	[illegible]	1	50	0.375	0.50	93	63	97	49	99	69	65	59	61	58	56	55	99	64	1.40	0.79	0.79	0.70	0.76	82	44	48	46	40	0	
[illegible]	[illegible]	1	50	0.375	0.50	46	63	97	49	99	59	60	61	61	55	56	54	54	50	1.40	0.79	0.70	0.70	0.76	77	44	43	41	44	0	
[illegible]	[illegible]	2	49	0.375	0.50	96	67	93	46	92	90	90	90	64	59	95	50	92	96	1.40	0.79	0.76	0.70	0.70	83	43	38	40	43	0	Use soil data from test 655
[illegible]	[illegible]	2	49	0.375	0.50	93	65	96	42	94	96	60	62	63	58	94	51	51	57	1.40	0.79	0.76	0.70	0.76	82	43	39	39	43	0	
[illegible]	[illegible]	2	49	0.375	0.50	93	63	97	49	99	69	69	59	61	58	56	55	99	64	1.40	0.79	0.70	0.70	0.70	82	43	42	45	40	0	
[illegible]	[illegible]	2	49	0.375	0.50	46	63	97	49	99	59	60	61	61	55	56	54	54	50	1.40	0.79	0.70	0.70	0.76	77	44	41	41	44	0	
[illegible]	1	2	50	0.375	0.50	55	71	68	64	74	80	88	81	92	64	67	68	73	79	0.09	0.78	0.71	0.09	0.07	56	92	48	90	93	0	Completed 50 passes with ease; 20% NW veg; (6"
[illegible]	1	2	50	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	grass stubbles)
[illegible]	1	2	50	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	91	
[illegible]	[illegible]	2	70	0.375	0.50	2	10	18	14	13	16	24	19	18	12	16	14	14	18	0.00	0.69	0.70	0.79	0.09	7	10	10	11	10	0	50% constant pull; vehicle pulled slightly to rt;
[illegible]	[illegible]	2	70	0.375	0.50	2	10	18	14	13	16	24	19	18	12	16	14	14	18	0.00	0.69	0.70	0.79	0.09	7	10	10	11	10	0	no veg.
[illegible]	[illegible]	2	70	0.375	0.50	2	10	18	14	13	16	24	19	18	12	16	14	14	18	0.00	0.69	0.70	0.79	0.09	7	10	10	11	10	0	
[illegible]	[illegible]	2	70	0.375	0.50	2	10	18	14	13	16	24	19	18	12	16	14	14	18	0.00	0.69	0.70	0.79	0.09	7	10	10	11	10	0	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.50	2	22	18	17	15	16	20	20	23	14	19	17	16	19	0.40	0.94	0.72	0.78	0.00	7	10	12	11	13	0	100% slip due to sinkage; dragging on 10th pass;
[illegible]	1	2	76	0.375	[illegible]	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	heavy dragging on 15th pass; no veg.
[illegible]	1	2	76	0.375	0.50	4	0	10	17	16	16	18	22	23	9	14	16	16	17	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	25	
[illegible]	1	2	70	0.375	0.50	19	16	14	13	30	34	30	33	31	19	14	30	24	32	0.99	0.90	0.69	0.62	0.99	10	0	21	15	10	0	Completed 50 passes with ease; 90% NW veg; 6"
[illegible]	1	2	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	or less.
[illegible]	1	2	70	0.375	0.50	18	27	27	22	31	37	34	33	31	24	25	27	30	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	91	
[illegible]	1	2	70	0.375	0.50	10	20	24	23	19	27	37	33	31	21	25	22	23	20	0.84	0.95	0.51	0.50	0.09	11	16	11	13	18	0	100% slip due to sinkage; dragging on 15th pass;
[illegible]	1	2	70	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	heavy dragging on 25th pass; 60% NW veg 6" or less
[illegible]	1	2	70	0.375	0.50	7	9	14	25	25	24	24	24	24	10	16	21	29	24	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	91	
[illegible]	[illegible]	[illegible]	49	0.375	0.50	40	40	40	48	39	39	48	39	37	49	47	44	42	39	0.72	0.70	0.70	0.60	0.51	38	23	31	29	21	0	
[illegible]	[illegible]	2	49	0.375	0.50	93	97	98	93	44	42	44	43	44	59	55	51	40	43	0.72	0.99	0.98	0.94	0.91	40	32	30	29	22	0	
[illegible]	[illegible]	2	49	0.375	0.50	99	99	92	91	44	43	44	47	40	54	52	40	40	44	0.72	0.58	0.66	0.90	0.91	30	30	32	27	22	0	
[illegible]	[illegible]	2	49	0.375	0.50	92	91	98	91	43	40	42	49	44	92	91	49	45	48	0.72	0.70	0.60	0.96	0.91	37	30	20	25	21	0	
[illegible]	1	1	76	0.375	0.50	0	26	24	22	10	20	34	34	31	19	24	21	23	27	0.62	0.60	0.49	0.00	0.79	18	14	10	14	20	0	Completed 50 passes with very little difficulty;
[illegible]	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	dragging on 26th pass; no veg.
[illegible]	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
[illegible]	1	1	76	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	20	
[illegible]	1	1	70	0.375	0.50	7	12	14	22	20	29	27	20	31	11	16	21	26	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	91	
[illegible]	1	1	40	0.375	0.50	46	40	42	50	40	39	41	43	49	45	47	44	43	40	0.05	0.62	0.60	0.63	0.61	20	20	20	27	24	0	Completed 50 passes with ease; 100% NW veg; area
[illegible]	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	mowed.
[illegible]	1	1	49	1.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
[illegible]	1	1	40	1.375	0.50	36	44	44	48	37	38	30	41	40	41	43	41	39	37	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	91	
[illegible]	1	1	50	0.375	0.50	40	54	46	47	30	30	41	44	46	50	49	44	41	39	0.67	0.68	0.69	0.60	0.69	34	30	30	27	30	0	100% slip due to sinkage; dragging on 9th pass;
[illegible]	1	1	50	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	heavy dragging on 13th pass; 100% NW veg 3" or
[illegible]	1	1	50	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	less

Loc., Test and Area	Moisture Content, Percent Dry Wt 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	Density, Lb/Cu Ft 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
[illegible]	999.9	47.2	40.0	999.9	40.1	54.7	999.9	999.9	999.9	999.9	73.1	72.7	999.9	71.9	67.0	999.9	999.9	999.9	999.9
[illegible]	999.9	47.2	40.9	999.9	40.1	54.7	999.9	999.9	999.9	999.9	73.1	72.7	999.9	71.9	67.0	999.9	999.9	999.9	999.9
[illegible]	999.9	40.9	48.5	999.9	49.2	40.3	999.9	999.9	999.9	999.9	70.4	72.0	999.9	71.7	71.2	999.9	999.9	999.9	999.9
[illegible]	999.9	40.9	48.5	999.9	49.2	40.3	999.9	999.9	999.9	999.9	70.4	72.0	999.9	71.7	71.2	999.9	999.9	999.9	999.9
[illegible]	999.9	61.4	87.6	999.9	69.2	69.2	999.9	999.9	999.9	999.9	63.2	60.9	999.9	61.0	94.0	999.9	999.9	999.9	999.9
[illegible]	999.9	60.2	79.4	999.9	80.2	60.1	999.9	999.9	999.9	999.9	80.0	99.1	999.9	80.9	91.7	999.9	999.9	999.9	999.9
[illegible]	999.9	60.2	79.4	999.9	80.2	60.1	999.9	999.9	999.9	999.9	80.0	99.1	999.9	80.9	91.7	999.9	999.9	999.9	999.9
[illegible]	999.9	60.2	79.4	999.9	80.2	60.1	999.9	999.9	999.9	999.9	80.0	99.1	999.9	80.9	91.7	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.0	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.0	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.0	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.0	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.1	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.1	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.1	999.9	999.9	999.9	999.9
[illegible]	999.9	31.3	40.1	999.9	41.5	47.0	999.9	999.9	999.9	999.9	73.0	69.0	999.9	69.2	60.1	999.9	999.9	999.9	999.9
[illegible]	999.9	29.2	43.0	999.9	45.0	44.3	999.9	999.9	999.9	999.9	74.0	79.3	999.9	67.6	60.0	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	36.4	35.0	999.9	33.3	33.2	999.9	999.9	999.9	999.9	67.0	65.0	999.9	64.5	67.0	999.9	999.9	999.9	999.9
[illegible]	999.9	36.4	35.0	999.9	33.3	33.2	999.9	999.9	999.9	999.9	67.0	65.0	999.9	64.5	67.0	999.9	999.9	999.9	999.9
[illegible]	999.9	36.4	35.0	999.9	33.3	33.2	999.9	999.9	999.9	999.9	67.0	65.0	999.9	64.5	67.0	999.9	999.9	999.9	999.9
[illegible]	999.9	36.4	35.0	999.9	33.3	33.2	999.9	999.9	999.9	999.9	67.0	65.0	999.9	64.5	67.0	999.9	999.9	999.9	999.9
[illegible]	[illegible]	38.5	61.0	999.9	34.0	36.2	999.9	999.9	999.9	999.9	60.0	65.0	999.9	60.2	65.0	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	31.0	30.3	999.9	32.6	30.1	999.9	999.9	999.9	999.9	60.1	70.5	999.9	66.9	71.1	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	40.1	35.0	999.9	46.5	31.3	999.9	999.9	999.9	999.9	60.0	66.1	999.9	74.1	69.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	40.3	46.5	999.9	39.2	66.7	999.9	999.9	999.9	999.9	73.0	70.0	999.9	67.7	99.1	999.9	999.9	999.9	999.9
[illegible]	999.9	40.3	46.5	999.9	39.2	66.7	999.9	999.9	999.9	999.9	73.0	70.0	999.9	67.7	99.1	999.9	999.9	999.9	999.9
[illegible]	999.9	40.0	46.0	999.9	39.1	30.1	999.9	999.9	999.9	999.9	77.1	66.0	999.9	60.4	60.4	999.9	999.9	999.9	999.9
[illegible]	999.9	40.0	46.0	999.9	39.1	30.1	999.9	999.9	999.9	999.9	77.1	66.0	999.9	60.4	60.4	999.9	999.9	999.9	999.9
[illegible]	999.9	62.4	30.6	999.9	49.0	34.3	999.9	999.9	999.9	999.9	90.0	63.0	999.9	60.0	67.4	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	43.3	42.3	999.9	49.0	60.1	999.9	999.9	999.9	999.9	75.6	75.9	999.9	67.6	64.6	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	26.3	46.4	999.9	57.1	68.1	999.9	999.9	999.9	999.9	84.2	74.0	999.9	65.0	57.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

Loc., Test and Area	Sheargraph Vane CU	Sheargraph Vane Tan PHI	Sheargraph Rubber AU	Sheargraph Rubber Tan ALPHA	Rut Depth LT	Rut Depth RT	Rut Width LT	Rut Width RT	Depth Water Table	D	D/W	G	G/R	Slip Pcnt
[illegible]	99.9	9.99	99.9	9.99	0.5	0.5	13.9	13.9	19.0	99999	9.99	631	99999	1
[illegible]	99.9	9.99	99.9	9.99	0.5	0.9	13.0	13.0	19.0	99999	9.99	595	99999	5
[illegible]	99.9	9.99	99.9	9.99	0.5	0.5	12.5	12.5	19.0	99999	9.99	490	99999	3
[illegible]	99.9	9.99	99.9	9.99	0.5	0.5	12.0	12.0	19.0	99999	9.99	380	99999	4
[illegible]	99.9	9.99	99.9	9.99	1.0	1.5	14.0	14.0	99.9	99999	9.99	799	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.0	1.0	14.2	14.2	99.9	99999	9.99	738	99999	999
[illegible]	99.9	9.99	99.9	9.99	2.0	2.0	16.5	16.5	99.9	99999	9.99	606	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.0	1.0	18.0	18.0	99.9	99999	9.99	907	99999	999
[illegible]	0.3	0.70	0.2	0.99	1.2	1.2	13.0	13.0	37.0	99999	9.99	9440	99999	2
[illegible]	0.3	0.70	0.2	0.99	1.4	1.4	12.0	12.0	37.0	99999	9.99	4940	99999	5
[illegible]	0.3	0.70	0.2	0.55	1.6	1.6	11.5	11.5	37.0	99999	9.99	4820	99999	3
[illegible]	0.3	0.70	0.2	0.99	1.5	1.5	11.5	11.5	37.0	99999	9.99	3020	99999	1
[illegible]	0.0	0.70	0.2	0.99	0.0	0.0	99.9	99.9	99.9	99999	9.99	1400	99999	4
[illegible]	0.0	0.70	0.2	0.99	0.0	0.0	99.9	99.9	99.9	99999	9.99	1430	99999	4
[illegible]	0.6	0.70	0.2	0.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	1430	99999	5
[illegible]	0.6	0.70	0.2	0.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	1340	99999	0
[illegible]	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.5	1.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	7.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	2.2	0.07	1.0	0.09	99.9	99.9	99.9	99.9	99.9	1170	0.20	1050	99999	49
[illegible]	2.2	0.07	1.0	0.09	99.9	99.9	99.9	99.9	99.9	1100	0.10	1440	99999	51
[illegible]	2.2	0.07	1.0	0.09	99.9	99.9	99.9	99.9	99.9	1070	0.10	1400	99999	46
[illegible]	2.2	0.07	1.0	0.09	99.9	99.9	99.9	99.9	99.9	1000	0.17	1446	99999	46
[illegible]	99.9	9.99	3.0	0.03	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	2.0	2.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	12.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	2.0	0.53	1.2	0.40	99.9	99.9	99.9	99.9	13.5	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	99.9	9999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	4.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	3.1	0.02	1.9	0.12	99.9	99.9	99.9	99.9	10.0	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	0.0	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	0.0	10.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	3.1	0.53	0.3	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	1460	99999	4
[illegible]	3.1	0.53	0.3	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	1350	99999	2
[illegible]	3.1	0.53	0.3	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	1070	99999	1
[illegible]	3.1	0.53	0.3	0.51	99.9	99.9	99.9	99.9	99.9	99999	9.99	950	99999	1
[illegible]	4.9	0.23	1.0	0.27	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.5	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	2.0	2.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	3.5	3.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	10.0	4.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	2.6	0.42	1.8	0.36	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.0	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	2.6	0.42	1.8	0.36	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	1.0	1.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	99.9	9.99	99.9	9.99	14.0	7.0	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-44

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE: STAFF SIZE	CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
340504	1	1	38	0.375	0.50	27	31	29	32	34	27	24	30	28	29	27	25	34	25	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	15	
340604	1	1	49	0.375	0.50	48	46	46	34	48	51	48	41	43	49	42	46	42	46	0.88	0.55	0.58	0.56	0.54	27	23	23	24	25	0	Dragging on 38th pass, completed 50 passes with very little difficulty. Test 604 & this test probably influenced by heavy grass roots.
340604	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
340604	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	10	
340604	1	1	49	0.375	0.50	27	30	32	36	41	39	38	30	38	32	35	36	39	39	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	21	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	50% constant pull.
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	23	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340704	2	1	66	0.375	0.50	4	21	19	18	16	24	28	29	24	15	19	18	19	23	0.93	0.83	0.58	0.51	0.47	8	18	18	18	11	99	
340802	1	1	49	0.375	0.50	46	30	28	31	30	39	38	37	39	35	38	38	36	39	0.93	0.88	0.67	0.51	0.50	23	18	19	18	23	0	100% slip due to sinkage. Dragging on 22nd pass. Tilting to rt; 100% NW veg 6" or less.
340802	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
340802	1	1	49	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	18	
340802	1	1	49	0.375	0.50	21	20	20	21	21	26	20	34	30	21	21	22	22	28	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	33	
340902	1	1	58	0.375	0.50	48	45	[illegible]	50	51	49	56	84	49	48	49	51	52	52	0.89	0.76	0.69	0.71	0.79	27	20	33	34	39	0	100% slip due to sinkage. Dragging on 5th pass. area mowed; 100% NW veg.
340902	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
340902	1	1	58	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	7	
347002	1	1	88	0.375	0.50	46	46	39	40	45	46	58	58	53	44	45	44	47	49	0.88	0.64	0.64	0.60	0.64	30	29	28	31	31	0	Completed 50 passes with ease, area mowed; 100% NW
347002	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
347002	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	18	
347002	1	1	88	0.375	0.50	17	28	30	31	30	36	39	34	37	32	27	31	32	34	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	21	
347102	1	1	88	0.375	0.50	42	27	29	29	31	35	28	19	10	30	31	28	26	29	0.99	0.73	0.69	0.60	0.63	21	22	19	17	16	0	Vehicle dragging on 22nd pass; heavy dragging on 42nd pass; unable to spin tracks when immob; 100% NW 6" or less.
347102	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
347102	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	11	
347102	1	1	88	0.375	0.50	31	21	28	19	16	17	19	34	28	21	21	19	16	18	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	40	
347203	1	1	88	0.375	0.50	7	18	0	10	33	32	38	37	28	8	18	20	30	32	0.91	0.60	0.50	0.71	0.70	0	10	11	30	26	0	100% slip due to sinkage; no veg.
347203	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
347303	1	1	88	0.375	0.50	14	12	9	24	32	31	30	30	30	12	18	22	30	31	0.90	0.88	0.64	0.67	0.71	6	0	14	18	22	0	- - - - - -
347303	1	1	88	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
347303	1	1	88	0.375	0.50	13	26	20	18	21	24	30	26	26	30	21	28	21	20	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
347402	1	1	88	0.375	0.50	26	31	19	18	22	41	37	28	21	28	28	23	21	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	18	11	18	22	0	- - - - - - ; dragging on 3rd pass; no veg.
347402	1	1	88	0.375	0.50	16	17	10	10	10	20	30	27	22	16	10	16	10	21	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	7	
347502	1	1	94	0.375	0.50	20	22	10	18	21	28	31	30	28	22	17	17	22	20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16	11	18	14	16	0	- - - - - - 8th pass;
347502	1	1	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
347502	1	1	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	18	
347502	1	1	94	0.375	0.50	4	9	18	18	14	12	18	18	21	9	18	18	14	15	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	38	
347602	1	1	94	0.375	0.50	23	22	19	22	22	22	21	30	20	20	17	22	22	24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14	10	18	14	16	0	Vehicle dragging on 8th pass; no veg.
347602	1	1	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	16	11	18	14	16	1	
347602	1	1	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	16	11	18	14	16	18	
347602	1	1	94	0.375	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	10	11	10	16	16	16	
347702	2	1	94	0.375	0.50	36	34	31	16	30	27	30	30	22	30	24	21	23	27	[illegible]	[illegible]	0.75	[illegible]	[illegible]	22	18	16	15	19	99	50% constant slip.
347702	2	1	94	0.375	0.50	30	21	18	9	30	28	25	10	19	21	14	15	17	21	0.76	0.68	0.75	0.64	0.64	16	10	11	11	18	99	
347702	2	1	94	0.375	0.50	10	30	19	11	30	22	30	30	20	[illegible]	[illegible]	15	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	[illegible]	99	
347702	2	1	94	0.375	0.50	11	18	9	9	21	22	30	19	16	11	11	13	17	21	0.76	0.56	0.75	[illegible]	[illegible]	8	0	10	10	10	99	
347702	2	1	94	0.375	0.50	0	14	18	9	30	33	38	10	14	11	11	13	17	22	0.81	0.71	0.53	[illegible]	0.58	9	0	7	10	13	99	
347702	2	1	94	0.375	0.50	0	18	18	0	30	20	18	18	16	9	10	13	10	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	9	7	11	12	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18
340504	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340604	999.9	51.6	53.2	[illegible]	46.2	54.0	999.9	999.9	999.9	999.9	68.9	66.3	999.9	71.8	64.4	999.9	999.9	999.9	999.9
340604	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340604	999.9	999.9	999.9	[illegible]	999.9	54.0	999.9	999.9	999.9	999.9	68.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340604	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340704	999.9	[illegible]	[illegible]	[illegible]	56.0	64.2	999.9	999.9	999.9	999.9	90.7	60.0	999.9	64.4	61.0	999.9	999.9	999.9	999.9
340802	999.9	[illegible]	[illegible]	[illegible]	65.0	64.3	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	52.7	[illegible]	999.9	999.9	999.9	999.9
340802	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340802	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340802	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
340902	999.9	[illegible]	[illegible]	[illegible]	50.5	61.0	999.9	999.9	999.9	999.9	[illegible]	72.4	999.9	65.0	[illegible]	999.9	999.9	999.9	999.9
340902	999.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9
340902	999.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9
347002	999.9	[illegible]	[illegible]	[illegible]	56.4	54.4	999.9	999.9	999.9	999.9	69.7	67.1	999.9	64.2	[illegible]	999.9	999.9	999.9	999.9
347002	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347002	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347002	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347102	999.9	46.4	59.5	[illegible]	68.9	63.3	999.9	999.9	999.9	999.9	68.8	61.6	999.9	56.9	56.4	999.9	999.9	999.9	999.9
347102	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347102	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347102	999.9	999.9	999.9	[illegible]	999.	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347203	999.9	66.1	84.5	[illegible]	82.0	57.2	999.9	999.9	999.9	999.9	58.5	51.2	999.9	50.6	64.8	999.9	999.9	999.9	999.9
347203	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347303	999.9	82.5	92.6	[illegible]	68.9	67.8	999.9	999.9	999.9	999.9	51.3	47.8	999.9	55.8	56.5	999.9	999.9	999.9	999.9
347303	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347303	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347402	999.9	61.4	84.9	[illegible]	54.2	57.0	999.9	999.9	999.9	999.9	58.6	50.2	999.9	64.4	65.6	999.9	999.9	999.9	999.9
347402	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347502	999.9	[illegible]	63.3	[illegible]	72.1	75.3	999.9	999.9	999.9	999.9	59.2	60.0	999.9	56.7	52.7	999.9	999.9	999.9	999.9
347502	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347502	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347502	999.9	999.9	999.9	[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
347602	999.9	[illegible]	[illegible]	[illegible]	70.0	63.2	999.9	999.9	999.9	999.9	62.4	52.4	999.9	53.6	61.2	999.9	999.9	999.9	999.9
347602	999.9	[illegible]	[illegible]	[illegible]	70.0	63.2	999.9	999.9	999.9	999.9	62.4	52.4	999.9	53.6	61.2	999.9	999.9	999.9	999.9
347602	999.9	[illegible]	[illegible]	[illegible]	70.0	63.2	999.9	999.9	999.9	999.9	62.4	52.4	999.9	53.6	61.2	999.9	999.9	999.9	999.9
347602	999.9	[illegible]	[illegible]	[illegible]	70.0	63.2	999.9	999.9	999.9	999.9	62.4	52.4	999.9	53.6	61.2	999.9	999.9	999.9	999.9
347702	999.9	[illegible]	[illegible]	[illegible]	57.2	54.0	999.9	999.9	999.9	999.9	65.0	61.9	999.9	65.0	69.7	999.9	999.9	999.9	999.9
347702	999.9	[illegible]	[illegible]	[illegible]	57.2	54.0	999.9	999.9	999.9	999.9	65.0	61.9	999.9	65.0	69.7	999.9	999.9	999.9	999.9
347732	999.9	[illegible]	[illegible]	[illegible]	75.0	73.4	999.9	999.9	999.9	999.9	61.9	59.2	999.9	[illegible]	53.7	999.9	999.9	999.9	999.9
347732	999.9	[illegible]	[illegible]	[illegible]	75.0	73.4	999.9	999.9	999.9	999.9	61.9	59.2	999.9	[illegible]	53.7	999.9	999.9	999.9	999.9
347732	999.9	[illegible]	[illegible]	[illegible]	75.0	73.4	999.9	999.9	999.9	999.9	61.9	59.2	999.9	[illegible]	53.7	999.9	999.9	999.9	999.9
347732	999.9	[illegible]	78.7	[illegible]	79.9	55.0	999.9	999.9	999.9	999.9	57.0	52.7	999.9	51.0	65.0	999.9	999.9	999.9	999.9

LOC. TEST AND AREA	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/H	B	B/R	SLIP CONT
340504	99.9	9.99	99.9	9.99	20.0	13.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
340604	2.0	0.49	0.8	0.42	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340604	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
340604	99.9	9.99	99.9	9.99	2.0	1.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
340604	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	914	99999	44
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	47
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	46
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	[illegible]
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	[illegible]
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	[illegible]	[illegible]	[illegible]	99999	46
340704	2.0	0.49	0.0	0.42	99.9	99.9	99.9	99.9	99.9	770	[illegible]	[illegible]	99999	40
340802	2.0	0.50	3.9	0.10	99.9	99.9	99.9	99.9	0.0	99999	9.99	99999	99999	999
340802	99.9	9.99	99.9	9.99	0.2	0.2	99.9	99.9	0.0	99999	9.99	99999	99999	999
340802	99.9	9.99	99.9	9.99	1.5	2.0	99.9	99.9	0.0	99999	9.99	99999	99999	999
340802	99.9	9.99	99.9	9.99	11.0	13.0	99.9	99.9	0.0	99999	9.99	99999	99999	999
340902	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	10.0	99999	9.99	99999	99999	999
340902	99.9	9.99	99.9	9.99	2.5	3.0	99.9	99.9	10.0	99999	9.99	99999	99999	999
340902	99.9	9.99	99.9	9.99	14.0	20.0	99.9	99.9	10.0	99999	9.99	99999	99999	999
347002	3.2	0.45	3.0	0.36	99.9	99.9	99.9	99.9	14.5	99999	9.99	99999	99999	999
347002	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	14.5	99999	9.99	99999	99999	999
347002	99.9	9.99	99.9	9.99	2.2	2.5	99.9	99.9	14.5	99999	9.99	99999	99999	999
347002	99.9	9.99	99.9	9.99	7.5	10.0	99.9	99.9	14.5	99999	9.99	99999	99999	999
347102	2.6	0.53	1.8	0.53	99.9	99.9	99.9	99.9	4.0	99999	9.99	99999	99999	999
347102	99.9	9.99	99.9	9.99	0.5	0.5	99.9	99.9	4.0	99999	9.99	99999	99999	999
347102	99.9	9.99	99.9	9.99	2.5	3.5	99.9	99.9	4.0	99999	9.99	99999	99999	999
347102	99.9	9.99	99.9	9.99	12.0	13.0	99.9	99.9	4.0	99999	9.99	99999	99999	999
347203	6.2	0.03	4.2	0.18	99.9	99.9	99.9	99.9	5.5	99999	9.99	99999	99999	999
347203	99.9	9.99	99.9	9.99	10.5	11.0	99.9	99.9	5.5	99999	9.99	99999	99999	999
347303	6.1	0.25	7.0	0.23	99.9	99.9	99.9	99.9	5.5	99999	9.99	99999	99999	999
347303	99.9	9.99	99.9	9.99	0.0	0.0	99.9	99.9	5.5	99999	9.99	99999	99999	999
347303	99.9	9.99	99.9	9.99	11.0	11.0	99.9	99.9	5.5	99999	9.99	99999	99999	999
347402	3.2	0.32	2.5	0.42	99.9	99.9	99.9	99.9	5.5	99999	9.99	99999	99999	999
347402	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
347502	3.2	0.32	2.5	0.42	99.9	99.9	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
347502	99.9	9.99	99.9	9.99	2.5	3.0	99.9	99.9	0.0	99999	9.99	99999	99999	999
347502	99.9	9.99	99.9	9.99	12.0	12.0	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
347502	99.9	9.99	99.9	9.99	14.0	14.0	99.9	99.9	0.0	99999	9.99	99999	99999	999
347602	3.2	0.32	2.5	0.42	99.9	99.9	99.9	99.9	6.0	99999	9.99	99999	99999	999
347602	3.2	0.32	2.5	0.42	1.5	1.5	99.9	99.9	6.0	99999	9.99	99999	99999	999
347602	3.2	0.32	2.5	0.42	0.0	0.0	99.9	99.9	6.0	99999	9.99	99999	99999	999
347602	3.2	0.32	2.5	0.42	13.0	13.0	99.9	99.9	6.0	99999	9.99	99999	99999	999
347702	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	12.0	[illegible]	0.68	99999	99999	999
347702	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	12.0	[illegible]	0.66	99999	99999	999
347732	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	7.0	[illegible]	0.67	99999	99999	999
347732	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	7.0	99999	9.99	99999	99999	999
347732	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	7.0	[illegible]	0.22	99999	99999	[illegible]
347732	5.2	0.40	2.1	0.49	99.9	99.9	99.9	99.9	2.0	1130	0.11	99999	99999	[illegible]

Table III-45

LOC, TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	CONE SIZE	RI 0	RI 3	RI 6	RI 9	RI 12	RI 15	RI 18	RI 21	RI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS

Remarks printed in the REMARKS column:

- 50% constant pull; parallel to test 477; use same data; no veg.
- 20% constant pull; no veg.
- 50% constant pull; no veg.
- 8 pass; parallel to test 480; use same data.
- 100% slip due to sinkage; dragging on 6th pass; tilting to lt; no veg.
- 50% constant pull; no veg.
- at 8 pass; use data from test 483.

LOC, TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	0-3	3-6	6-9	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/H	S	A/B	SLIP PCNT

Table III-46

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
[illegible]	2	1	94	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9	9	99	
[illegible]	2	1	94	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13	[illegible]	14	11	15	[illegible]	[illegible]	0.77	[illegible]	[illegible]	[illegible]	8	11	6	7	99	
[illegible]	3	1	76	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12	[illegible]	9	999	13	99	
[illegible]	3	1	76	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	[illegible]	99	
[illegible]	3	1	76	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20	[illegible]	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14	999	[illegible]	99	
[illegible]	3	1	76	0.375	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.79	[illegible]	11	[illegible]	999	[illegible]	99	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT [illegible]	[illegible]	[illegible]	[illegible]	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEAROGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	70.[illegible]	66.9	999.9	999.9	999.9	999.9	67.[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	[illegible]	[illegible]	99999	99999	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	73.4	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	[illegible]	[illegible]	99999	99999	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77.[illegible]	[illegible]	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	3.[illegible]	[illegible]	1.3	[illegible]	99.9	99.9	99.9	99.9	9.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	3.[illegible]	[illegible]	[illegible]	[illegible]	99.9	99.9	99.9	99.9	9.[illegible]	99999	[illegible]	[illegible]	99999	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	57.4	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	2.[illegible]	[illegible]	2.[illegible]	[illegible]	99.9	99.9	99.9	99.9	9.[illegible]	99999	[illegible]	[illegible]	99999	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64.[illegible]	999.9	999.9	999.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	999.9	999.9	999.9	2.3	[illegible]	99.9	9.99	99.9	99.9	99.9	99.9	9.[illegible]	99999	[illegible]	[illegible]	99999	[illegible]

Table III-47

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
4 101	1	3	48	0.029	0.50	22	72	62	44	95	79	[illegible]	118	120	90	59	54	90	73	0.20	0.23	0.44	9.99	9.99	15	14	24	999	999	0	100% slip; vehicle riding on veg mat; 100% SW veg.
4 101	1	3	48	0.029	0.50	29	30	22	30	50	66	83	118	120	27	29	30	51	66	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
4 201	1	3	45	0.029	0.50	46	71	71	64	64	83	102	130	166	60	60	66	71	83	0.16	0.29	0.24	9.99	9.99	18	17	16	999	999	0	100% slip; no H_2O in ruts; 100% SW veg.
4 201	1	3	45	0.029	0.50	13	26	30	92	71	97	130	159	195	24	37	92	73	121	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
4 301	1	3	45	0.029	0.50	34	72	78	74	73	93	100	130	109	61	75	79	80	89	0.17	0.12	0.19	9.99	9.99	18	9	14	999	999	0	100% slip; vehicle riding on veg mat for 2 pass. veg 100% SW.
4 301	1	4	45	0.029	0.50	16	20	20	51	94	142	167	194	210	21	38	97	96	134	9.99	9.99	9.99	9.99	9.99	999	999	999	999	[illegible]	3	
4 401	1	3	45	0.029	0.50	99	82	73	60	73	92	118	144	146	71	74	71	78	92	0.19	0.30	0.32	9.99	9.99	13	27	28	999	999	0	100 % slip; riding on veg mat for 2 passes; 100% SW veg; dragging on 5th pass.
4 401	1	3	45	0.029	0.50	15	33	28	56	83	129	130	190	222	23	37	54	80	115	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
4 501	1	3	45	0.029	0.50	33	56	60	59	60	80	107	167	188	51	57	50	65	88	0.18	0.28	0.34	9.99	9.99	9	13	28	999	999	0	100% slip; no SFC water; 100% veg SW
4 501	1	3	45	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
4 601	1	3	45	0.029	0.50	42	92	94	89	94	109	120	105	194	70	90	91	96	111	0.28	0.19	0.25	9.99	9.99	15	14	24	999	999	0	" " " " " " ; veh riding on veg mat.
4 601	1	3	45	0.029	0.50	11	21	20	44	68	108	133	167	173	19	30	46	73	102	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
4 701	1	3	45	0.029	0.50	30	62	68	64	70	80	98	110	136	56	65	67	74	80	0.16	0.28	0.24	9.99	9.99	9	14	16	999	999	0	100% slip, no SFC water; 100% SW veg, veh sitting on drive shaft.
4 701	1	3	45	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	1	
4 801	1	3	45	0.029	0.50	30	61	55	54	90	72	80	109	150	48	56	56	62	72	0.10	0.16	0.10	9.99	9.99	9	9	18	999	999	0	Vehicle riding on grass mat for 3 pass; imm due to sinkage.
4 801	1	3	45	0.029	0.50	21	26	28	38	46	63	84	116	144	23	27	34	47	64	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
4 901	1	3	45	0.029	0.50	30	66	64	60	75	94	105	150	192	50	65	68	70	91	0.10	0.28	0.22	9.99	9.99	18	16	15	999	999	0	No drag; no water in ruts; 100% SW veg (3" or less)
4 901	1	3	45	0.029	0.50	12	18	20	61	89	120	150	208	240	19	30	57	80	121	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
4 1001	1	3	45	0.029	0.50	30	70	60	64	72	84	102	130	147	50	67	67	73	86	0.21	0.17	0.19	9.99	9.99	12	11	13	999	999	0	100% slip, dragging, 100% SW veg (2" or less)
4 1001	1	3	90	0.029	0.50	22	24	27	42	50	80	100	100	159	24	30	40	59	80	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
4 1101	1	3	90	0.029	0.50	42	85	70	62	62	78	100	182	130	66	73	60	47	80	0.28	0.31	0.31	0.00	0.00	13	13	31	40	69	0	Vehicle dragging on 4th pass; no SFC water; 100% SW veg.
4 1101	1	3	90	0.029	0.50	12	24	44	73	102	140	170	222	271	27	47	73	105	140	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
4 1201	1	3	90	0.029	0.50	30	60	75	93	84	90	74	90	119	67	78	61	95	60	0.19	0.16	0.36	0.34	0.39	13	12	22	28	22	0	" " " " " "
4 1201	1	3	90	0.029	0.50	0	12	16	34	62	111	144	170	196	12	21	37	60	106	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
4 1301	1	3	90	0.029	0.50	34	62	99	90	87	84	112	109	178	92	90	61	78	80	0.32	0.44	0.34	0.30	0.48	17	20	21	37	37	0	" " " 2nd " " "
4 1301	1	3	90	0.029	0.50	0	22	44	78	99	130	160	103	289	28	40	71	102	134	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	4	
4 1402	1	3	90	0.029	0.50	30	62	98	40	85	74	91	187	181	47	93	91	90	74	0.28	0.24	0.41	0.30	0.30	14	19	21	18	14	0	100% slip; 100% SW veg.
4 1402	1	3	90	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
4 1502	1	3	49	0.029	0.50	18	50	60	60	80	80	104	100	164	47	63	67	74	94	0.24	0.26	0.34	9.99	9.99	1	15	23	999	999	0	100% slip; SFC wet.
4 1502	1	3	49	0.029	0.50	18	33	48	61	80	120	170	164	202	30	46	68	90	120	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
4 1601	1	3	49	0.029	0.50	20	60	60	97	83	82	91	180	184	55	64	60	87	79	0.27	0.23	0.43	9.99	9.99	18	21	27	999	999	0	" " "
4 1601	1	3	49	0.029	0.50	9	31	20	34	59	89	110	160	106	28	38	40	59	80	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	5	
4 1701	1	3	49	0.029	0.50	30	46	48	40	82	66	78	90	117	40	48	47	55	65	0.21	0.20	0.28	9.99	9.99	8	12	12	999	999	0	" " "
4 1701	1	3	49	0.029	0.50	14	30	34	40	61	70	90	118	140	27	37	47	62	79	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	3	
4 1801	1	3	49	0.029	0.50	28	70	60	64	70	92	114	189	154	59	67	67	75	92	0.18	0.18	0.21	9.99	9.99	13	18	16	999	999	0	100% slip; no SFC water; no dragging.
4 1801	1	3	49	0.029	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	6	
4 1901	1	3	90	0.029	0.50	32	33	40	30	44	50	79	112	199	35	37	44	45	59	0.20	0.30	0.30	0.00	0.20	8	15	18	22	30	0	" " " "
4 1901	1	3	90	0.029	0.50	5	22	60	80	102	160	108	210	284	29	97	98	137	180	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	2	
4 2001	1	3	90	0.029	0.50	34	61	59	90	90	84	100	134	164	32	61	62	71	86	0.26	0.08	0.40	0.42	0.28	14	10	29	30	40	0	" " " " ; dragging on 4th pass
4 2001	1	3	90	0.029	0.50	12	42	67	71	87	131	170	203	232	40	61	79	94	131	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
4 2101	1	3	90	0.029	0.50	90	139	134	116	116	122	148	104	235	118	120	128	118	127	0.40	0.40	0.39	0.31	0.00	91	90	40	29	79	0	" " " " " 8th "
4 2101	1	3	90	0.029	0.50	17	76	128	176	280	293	270	290	291	72	129	179	219	290	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	12	
4 2201	1	3	90	0.029	0.50	94	109	118	80	89	97	120	172	284	91	101	96	91	109	0.27	0.00	0.31	0.47	0.44	20	20	40	30	40	0	" " " " " 6th "
4 2201	1	3	90	0.029	0.50	14	42	78	107	164	222	201	208	290	40	88	120	172	216	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
4 2301	1	3	44	0.029	0.50	47	94	79	78	78	90	118	180	197	73	81	79	79	98	0.13	0.18	0.34	9.99	9.99	9	12	20	999	999	0	" " " " ; heavy veg mat.
4 2301	1	3	44	0.029	0.50	10	20	17	34	48	77	128	189	282	18	28	38	50	88	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	9	
4 2401	1	3	80	0.029	0.50	34	60	64	86	82	71	99	116	128	53	60	61	83	76	0.04	0.46	0.32	0.30	0.00	13	20	32	37	47	0	" " " "
4 2401	1	3	80	0.029	0.50	0	20	56	98	102	180	200	206	308	30	50	98	125	100	9.99	9.99	9.99	9.99	9.99	999	999	999	999	999	13	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-1	0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	0-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEARGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	D	B/H	B	B/H	SLIP PCNT
4 101	999.9	36.8	26.3	999.9	20.4	21.9	999.9	999.9	999.9	999.9	82.2	101.2	999.9	102.8	104.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999
4 101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	9.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 201	999.9	31.2	26.3	999.9	23.1	22.6	999.9	999.9	999.9	999.9	89.1	94.9	999.9	99.4	96.7	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999
4 201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	6.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 301	999.9	36.4	26.9	999.9	27.3	32.1	999.9	999.9	999.9	999.9	81.8	93.8	999.9	91.3	78.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999
4 301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.5	10.1	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 401	999.9	38.6	26.8	999.9	22.8	20.7	999.9	999.9	999.9	999.9	78.9	93.0	999.9	96.8	94.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.3	9.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 501	999.9	40.1	26.0	999.9	22.9	29.1	999.9	999.9	999.9	999.9	66.6	84.9	999.9	99.6	89.5	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.0	99999	9.99	99999	99999	999
4 501	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 601	999.9	37.0	29.4	999.9	19.8	18.1	999.9	999.9	999.9	999.9	78.2	98.4	999.9	102.1	105.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.5	7.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 701	999.9	38.7	26.0	999.9	21.6	19.8	999.9	999.9	999.9	999.9	91.0	95.4	999.9	103.2	103.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 801	999.9	41.1	28.1	999.9	27.6	22.1	999.9	999.9	999.9	999.9	75.0	96.2	999.9	93.5	99.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.3	9.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 901	999.9	38.6	26.1	999.9	20.1	19.7	999.9	999.9	999.9	999.9	88.7	88.1	999.9	107.4	101.2	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	8.4	9.5	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1001	999.9	34.2	26.8	999.9	26.5	21.4	999.9	999.9	999.9	999.9	85.1	93.6	999.9	96.4	100.0	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	9.0	4.8	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1101	999.9	32.2	28.9	999.9	23.3	25.7	999.9	30.4	26.1	999.9	85.3	95.4	999.9	98.2	93.5	999.9	88.4	98.3	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
4 1101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.4	14.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1201	999.9	36.3	26.1	999.9	25.2	21.0	999.9	28.8	19.1	999.9	88.4	98.6	999.9	97.3	101.2	999.9	105.7	106.0	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.0	14.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1301	999.9	36.7	29.0	999.9	35.0	29.8	999.9	32.3	29.8	999.9	84.3	89.6	999.9	84.2	87.8	999.9	88.6	91.4	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
4 1301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.3	11.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1402	999.9	[illegible]	[illegible]	999.9	25.1	21.3	999.9	23.4	21.8	999.9	999.9	999.9	999.9	98.4	97.6	999.9	101.0	104.5	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1402	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	18.0	18.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1502	999.9	38.1	26.1	999.9	22.4	20.7	999.9	999.9	999.9	999.9	83.0	95.4	999.9	98.2	101.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1502	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	5.0	6.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1601	999.9	34.2	26.0	999.9	25.5	22.0	999.9	999.9	999.9	999.9	85.8	96.0	999.9	99.0	100.3	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1601	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	10.4	7.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1701	999.9	39.0	27.3	999.9	21.6	21.3	999.9	999.9	999.9	999.9	69.6	93.7	999.9	90.0	101.1	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1701	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	4.0	4.2	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1801	999.9	34.1	27.9	999.9	20.3	21.1	999.9	999.9	999.9	999.9	85.0	93.2	999.9	100.9	101.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
4 1801	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 1901	999.9	39.6	26.1	999.9	19.2	15.1	999.9	18.2	23.3	999.9	92.5	97.8	999.9	103.7	105.4	999.9	101.0	102.6	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 1901	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	15.1	17.3	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 2001	999.9	35.0	26.7	999.9	22.3	21.4	999.9	21.2	23.9	999.9	88.8	96.6	999.9	99.6	102.0	999.9	106.7	108.4	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	2.5	99999	9.99	99999	99999	999
4 2001	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	16.9	20.7	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 2101	999.9	33.0	17.9	999.9	17.3	17.0	999.9	18.4	22.0	999.9	88.9	99.4	999.9	103.4	106.3	999.9	105.3	104.0	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999	999
4 2101	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.3	15.0	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 2201	999.9	37.6	19.0	999.9	16.2	17.3	999.9	19.7	22.6	999.9	96.3	101.9	999.9	103.2	104.8	999.9	101.0	100.6	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	13.0	99999	9.99	99999	99999	999
4 2201	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	16.1	16.9	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 2301	999.9	32.1	22.0	999.9	22.6	18.6	999.9	999.9	999.9	999.9	84.6	99.1	999.9	98.8	103.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	4.0	99999	9.99	99999	99999	999
4 2301	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	7.0	6.6	99.9	99.9	99.9	99999	9.99	99999	99999	999
4 2401	999.9	33.0	26.0	999.9	22.3	23.6	999.9	18.4	20.0	999.9	84.5	98.6	999.9	100.9	103.1	999.9	105.3	104.3	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.0	99999	9.99	99999	99999	999
4 2401	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	14.0	16.9	99.9	99.9	99.9	99999	9.99	99999	99999	999

Table III-48

LOC. TEST AND AREA	TEST TYPE	SOIL TYPE	VEH CODE NO.	PENETROMETER TYPE STAFF SIZE	PENETROMETER TYPE CONE SIZE	CI 0	CI 3	CI 6	CI 9	CI 12	CI 15	CI 18	CI 21	CI 24	CI AVG 0-6	CI AVG 3-9	CI AVG 6-12	CI AVG 9-15	CI AVG 12-18	RI 0-6	RI 3-9	RI 6-12	RI 9-15	RI 12-18	RCI 0-6	RCI 3-9	RCI 6-12	RCI 9-15	RCI 12-18	PASS NO.	REMARKS
4 2501	1	3	44	0.025	0.50	36	92	91	93	[illegible]	74	94	188	148	40	98	99	62	76	0.24	0.34	[illegible]	[illegible]	[illegible]	11	18	38	999	999	[illegible]	100% slip; heavy veg mat; no SPC water.
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	14	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	; dragging
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	16	[illegible]	28	[illegible]	
[illegible]	1	3	[illegible]	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48	75	[illegible]	
[illegible]	1	3	100	0.025	0.50	999	999	999	999	999	999	999	999	999	999	999	999	999	999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	999	999	999	999	999	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	159	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30	58	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	; SPC wet.
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	; SPC damp.
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	; no SPC water
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	;
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	1	3	100	0.025	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

LOC. TEST AND AREA	MOISTURE CONTENT, PERCENT DRY WT 0-6	0-6	0-6	0-6	0-3	3-6	6-12	12-15	15-18	12-18	DENSITY, LB/CU FT 0-3	3-6	3-6	6-9	9-12	6-12	12-15	15-18	12-18	SHEAROGRAPH VANE CU	VANE TAN PHI	RUBBER AU	RUBBER TAN ALPHA	RUT DEPTH LT	RUT DEPTH RT	RUT WIDTH LT	RUT WIDTH RT	DEPTH WATER TABLE	B	B/W	R	A/R	SLIP PCNT
4 2501	999.9	[illegible]	[illegible]	999.9	21.9	22.7	999.9	999.9	999.9	999.9	88.5	98.1	999.9	103.8	108.8	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	99.9	99.9	99.9	99.9	3.1	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	6.0	6.4	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25.4	22.4	999.9	19.6	18.3	999.9	76.4	93.6	999.9	94.4	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	5.0	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23.6	22.5	999.9	23.1	17.9	999.9	81.3	94.3	999.9	96.7	97.8	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	15.1	19.4	99.9	99.9	1.0	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21.7	19.4	999.9	19.6	21.5	999.9	77.7	97.0	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	2.0	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27.1	24.8	999.9	[illegible]	21.6	999.9	76.4	93.9	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	16.1	14.5	99.9	99.9	2.1	99999	9.99	99999	99999	999
[illegible]	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	99.9	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	22.7	19.8	999.9	[illegible]	19.7	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	13.1	17.5	99.9	99.9	3.1	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	12.4	12.4	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	13.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	13.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	21.1	21.2	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	99.7	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	7.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	14.9	17.1	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20.2	18.2	999.9	[illegible]	19.7	999.9	[illegible]	99.7	999.9	[illegible]	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	8.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	18.2	17.6	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27.1	21.7	999.9	[illegible]	19.0	999.9	[illegible]	97.3	999.9	92.1	[illegible]	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	6.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	17.3	13.4	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	6.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	21.1	18.7	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	5.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	23.4	19.2	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	99.9	9.99	99.9	9.99	[illegible]	[illegible]	99.9	99.9	17.0	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24.3	19.7	999.9	[illegible]	20.0	999.9	[illegible]	[illegible]	999.9	[illegible]	102.8	999.9	101.3	102.7	999.9	99.9	9.99	99.9	9.99	18.2	18.2	99.9	99.9	[illegible]	99999	9.99	99999	99999	999
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19.1	19.3	999.9	19.6	21.0	999.9	98.2	103.4	999.9	103.1	101.2	999.9	[illegible]	[illegible]	999.9	99.9	9.99	99.9	9.99	15.1	17.1	99.9	99.9	17.0	99999	9.99	99999	99999	999
4 4002	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	99.9	9.99	99.9	9.99	17.8	17.3	99.9	99.9	17.0	99999	9.99	99999	99999	999

TABLE III-49

SPEED TEST VEHICLE PERFORMANCE

Location Test No. Area	Gear	RPM	Feet per sec	RCI Depth, in. 0 to 6	3 to 9	6 to 12
			Vehicle Code No. 76			
329301	4 TR 1st	2000	2.5	26	32	36
	2nd	1550	3.3			
	2nd	1650	3.5			
	2 TR 1st	2350	2.9			
	2nd	2000	4.4			
	3rd	1300	5.9			
329401	4 TR 1st	2300	2.8	31	35	31
	2nd	2000	4.4			
	2nd	2150	4.7			
	2 TR 1st	2350	3.1			
	2nd	2000	4.5			
	3rd	1750	7.4			
	3rd	1750	8.0			
341202	2 TR 3rd	2400	10.3	51	59	60
	3rd	2450	10.3			
	4th	1800	14.5			
	4th	1900	15.2			
	5th	1700	16.1			
	5th	1700	16.5			
343102	2 TR 4th	2300	15.6	24	22	25
	4th	2300	15.3			
	5th	1950	15.9			
	5th	1950	17.4			
	5th	2000	17.1			
			Vehicle Code No. 66			
329501	H-3	1900	23.4	31	35	31
	H-3	1800	26.8			
	H-3	1800	25.9			
330502	H-2	2400	22.4	20	27	31
330602	H-2	1400	12.4	20	27	31
330702	H-2	1700	13.0	20	27	31
330802	H-1	3300	16.7	20	27	31
340602	H-1	4300	20.2	38	38	40
		4300	21.4			
		4300	21.0			
			Vehicle Code No. 49			
341302	H-3	2300	33.1	36	28	32
	H-3	2450	36.7			
	H-4	1000	25.2			
	H-4	1000	25.5			
341402	H-3	2200	34.7	40	30	37
	H-3	2200	36.7			
	H-4	900	18.8			
	H-4	900	18.8			
341706	H-3	2100	29.5	41	42	44
	H-3	2400	34.5			
	H-3	2400	34.6			
341802	H-3	2200	30.4	19	20	21
	H-3	2200	32.7			
	H-4	850	17.0			

Location Test No. Area	Gear	RPM	Feet per sec	RCI Depth, in. 0 to 6	3 to 9	6 to 12
			Vehicle Code No. 70			
344302	H-2	3600	31.1	55	60	64
	H-2	4000	36.2			
	H-2	4050	35.5			
	H-3	2400	37.8			
	H-3	2400	35.0			
	H-3	2500	33.8			
344402	H-2	3800	33.6	47	37	40
	H-2	4000	31.4			
	H-2	4000	32.9			
	H-3	2100	29.8			
	H-3	2200	28.6			
	H-3	2300	32.4			
344502	H-2	4000	35.5	21	14	18
	H-2	4000	35.6			
	H-3	2500	34.3			
	H-3	2500	36.8			
	H-3	2500	34.1			
344602	H-2	4000	31.0	29	31	30
	H-2	4000	33.1			
	H-2	4000	35.1			
	H-3	2600	34.2			
	H-3	2600	33.8			
			Vehicle Code No. 56			
332902	L-2	2750	12.5	41	43	34
333002	L-3	2600	20.6	40	47	38
333102	H-2	2200	20.0	39	42	35
			Vehicle Code No. 58			
341502	H-2	2700	23.7	23	26	24
	H-2	2700	23.9			
	H-2	2700	25.2			
	H-3	1700	24.8			
341606	H-2	2700	24.7	56	42	41
	H-2	2700	26.2			
	H-3	1900	35.3			

TABLE III-50

SURFACE TRACTION TESTS IN CLAY

Date	0-1" M.C.-%	Sheargraph Data: Vane c	Vane $\tan\phi$	Rubber a	Rubber $\tan\alpha$	V τ/σ_{10}	R τ/σ_{10}	M37, 4x4 W=7240 LB. 30 PSI D/W	M38A1, 4x4 W=3560 LB. 18.5 PSI D/W	M29C W=5960 LB. D/W
July 15	23.0	0.2	0.73	0.5	0.45	0.84	0.50	0.66	----	0.77
July 15	27.0	0.4	0.65	0.2	0.14	0.66	0.20	0.20	----	0.37
July 21	15.0	0.2	1.07	0	0.65	1.02	0.71	0.57	----	0.76
July 23	23.0	2.2	0.42	2.8	0.16	0.71	0.43	0.23	----	0.62
July 23	38.0	1.8	0.16	1.0	0.21	0.36	0.32	0.14	----	0.32
July 24	31.0	1.0	0.16	1.0	0.09	0.29	0.28	0.14	0.18	0.25
July 24	27.0	1.0	0.23	1.0	0.21	0.35	0.32	0.20	0.20	0.30
Nov. 6	15.0	0.0	0.81	0.3	0.36	0.90	0.32	----	----	0.77
Nov. 7	27.0	2.0	0.10	1.5	0.05	0.28	0.20	----	0.22	0.68
Nov. 10	21.0	2.0	0.60	2.0	0.60	0.75	0.70	0.85	----	0.84
Nov. 12	19.0	---	----	0.5	0.68	----	0.74	0.72	0.61	0.83

SURFACE TRACTION TESTS IN SILT

Date	0-1" M.C.-%	Vane c	Vane $\tan\phi$	Rubber a	Rubber $\tan\alpha$	V τ/σ_{10}	R τ/σ_{10}	M37 D/W	M38A1 D/W	M29C D/W
June 23	----	0.9	0.33	1.3	0.16	0.35	0.26	0.18	0.22	0.26
June 24	----	0.0	0.65	0.0	0.25	0.70	0.28	----	----	0.26
June 26	42.0	1.5	0.23	1.0	0.14	0.41	0.24	0.13	----	0.23
June 26	42.0	0.9	0.21	0.9	0.19	0.26	0.25	0.13	0.14	----
June 30	38.0	0.7	0.25	0.9	0.21	0.30	0.25	0.13	0.13	0.22
July 1	27.8	1.3	0.33	1.7	0.33	0.44	0.42	0.16	----	----
July 1	27.8	1.3	0.33	1.9	0.25	0.44	0.37	----	----	0.35
July 1	28.0	1.3	0.33	0.5	0.42	0.44	0.50	----	0.19	----
July 2	11.6	0.0	0.84	0.3	0.73	0.83	0.75	0.61	----	0.68
July 6	45.0	0.6	0.25	1.0	0.25	0.34	0.33	0.16	----	----
July 6	45.0	0.6	0.25	0.2	0.29	0.34	0.32	----	----	0.28
July 6	45.0	0.6	0.25	0.7	0.25	0.34	0.30	----	0.20	----
July 10	21.0	1.0	0.60	0.8	0.51	0.70	0.76	0.28	----	----
July 10	21.0	1.0	0.60	0.3	0.62	0.70	0.73	----	----	0.48
July 10	21.0	1.0	0.60	1.0	0.36	0.70	0.45	----	0.26	----
July 23	31.0	0.9	0.19	0.5	0.19	0.23	0.34	0.17	----	0.15
July 24	17.0	2.0	0.53	1.7	0.42	1.05	0.78	0.22	0.40	0.29
Nov. 6	20.0	0.0	0.78	0.0	0.27	0.87	0.26	----	----	0.75
Nov. 7	28.0	1.3	0.18	1.4	0.18	0.33	0.24	----	0.47	0.65
Nov. 9	12.0	1.5	0.93	1.0	0.55	1.06	0.60	0.69	----	0.73
Nov. 10	16.5	0.5	0.58	0.2	0.51	0.62	0.55	0.67	0.57	0.66
Nov. 10	16.5	0.5	0.58	0.2	0.51	0.62	0.55	0.47	----	----
Nov. 10	16.5	0.5	0.58	0.2	0.51	0.62	0.55	0.67	0.57	0.66
Nov. 10	16.5	0.5	0.58	0.2	0.51	0.62	0.55	0.47	----	----

APPENDIX IV

PLOTS OF COMPOSITE VEHICLE PERFORMANCE VERSUS RCI_1

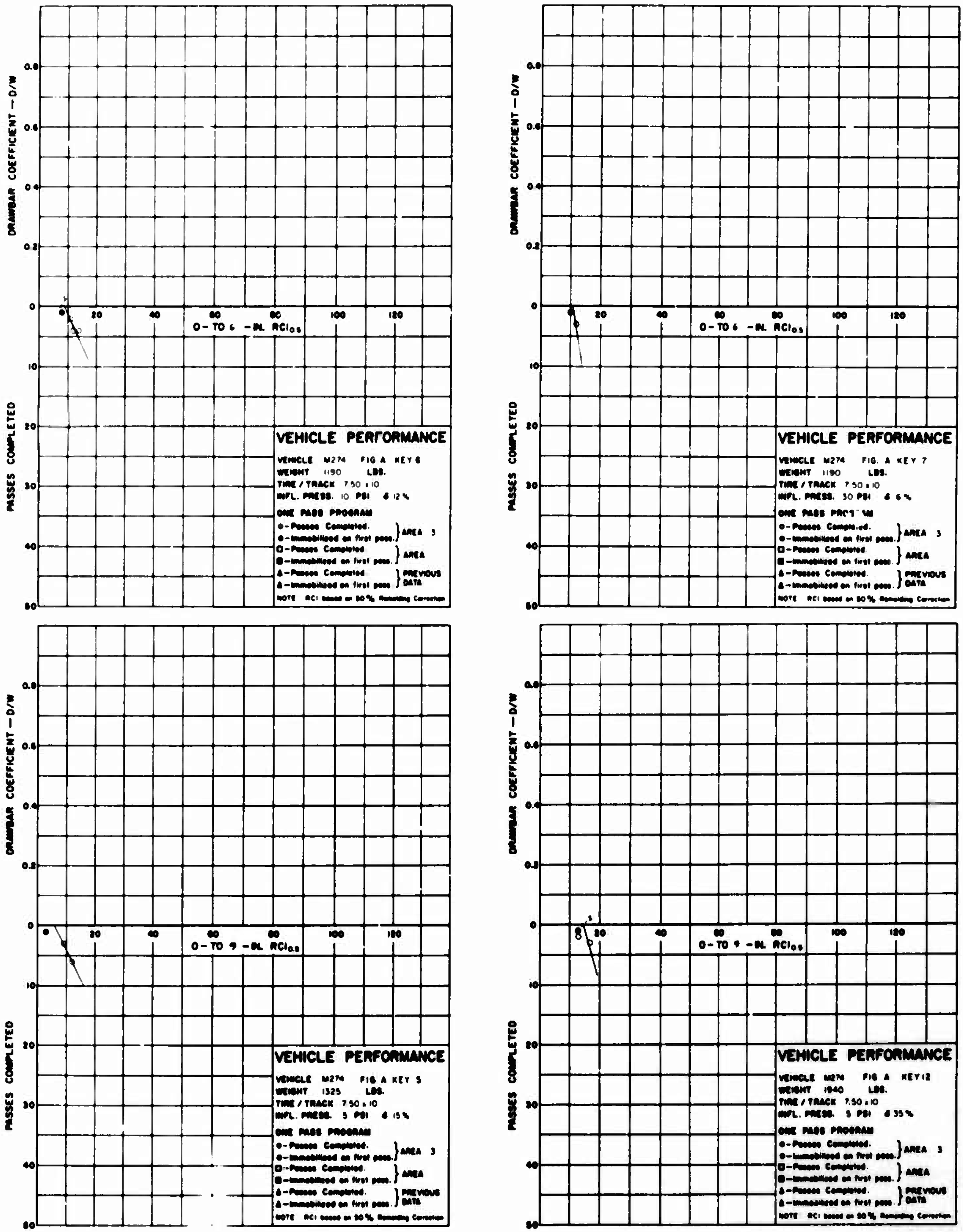
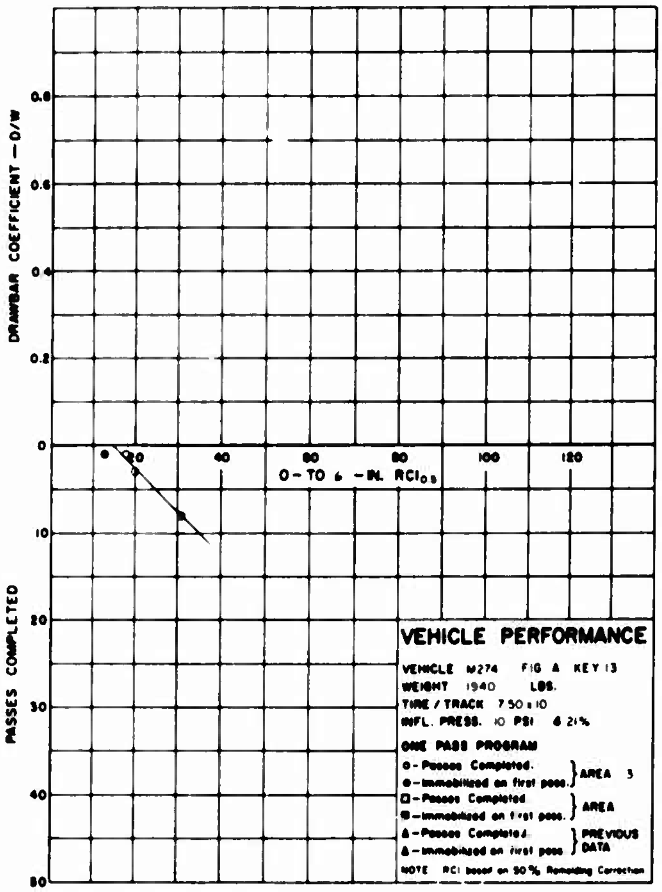
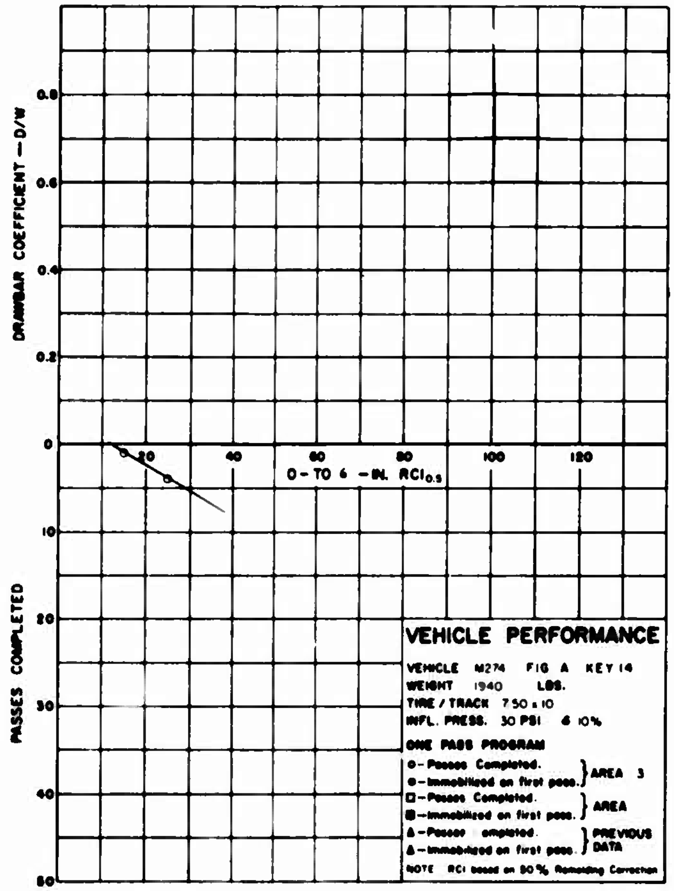
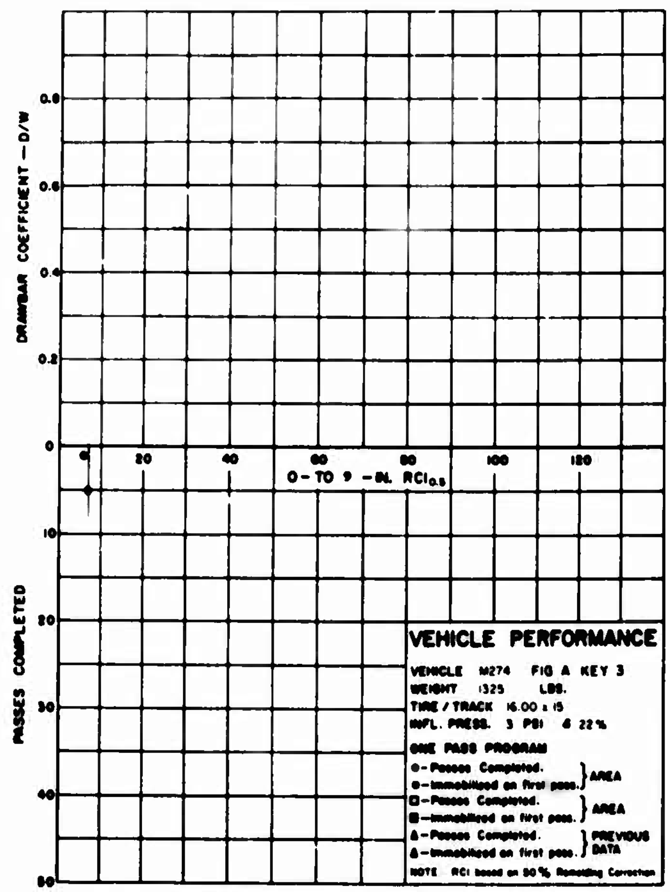

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 - TO 6 - IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 6
WEIGHT 1190 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 10 PSI δ 12%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA 3
□-Passes Completed
■-Immobilized on first pass.
AREA
△-Passes Completed
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction
VEHICLE PERFORMANCE
VEHICLE M274 FIG. A KEY 7
WEIGHT 1190 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 30 PSI δ 6%
0 - TO 9 - IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 5
WEIGHT 1325 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 5 PSI δ 15%
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 12
WEIGHT 1940 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 5 PSI δ 35%

Fig. IV-1


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 6 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 13
WEIGHT 1940 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 10 PSI @ 21%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA 3
□-Passes Completed
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
▲-Immobilized on first pass
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 6 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 14
WEIGHT 1940 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 30 PSI @ 10%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes ompleted.
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 9 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 3
WEIGHT 1325 LBS.
TIRE / TRACK 16.00 x 15
INFL. PRESS. 3 PSI @ 22%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction

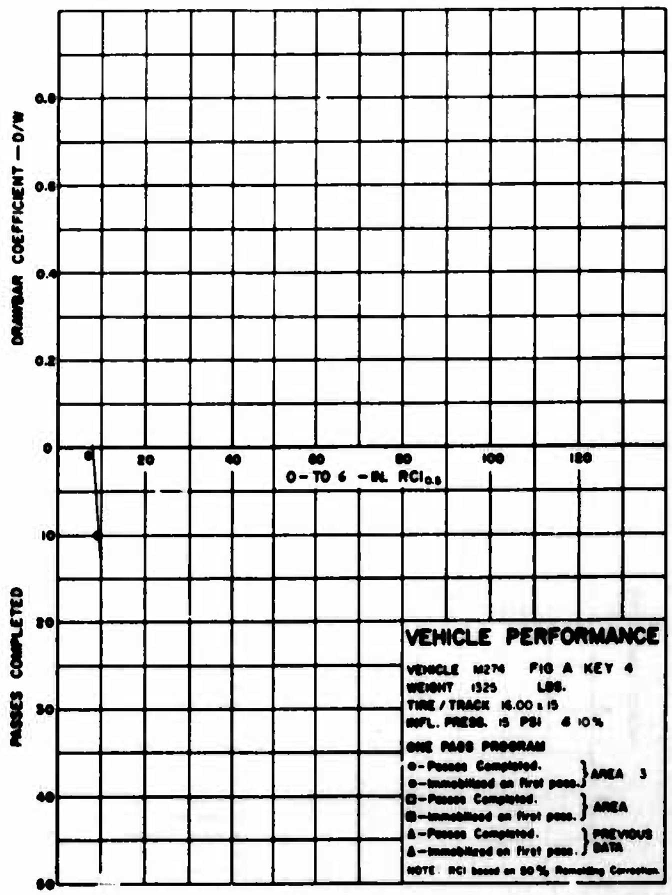

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 6 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 4
WEIGHT 1325 LBS.
TIRE / TRACK 16.00 x 15
INFL. PRESS. 15 PSI @ 10%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction.

Fig. IV-2

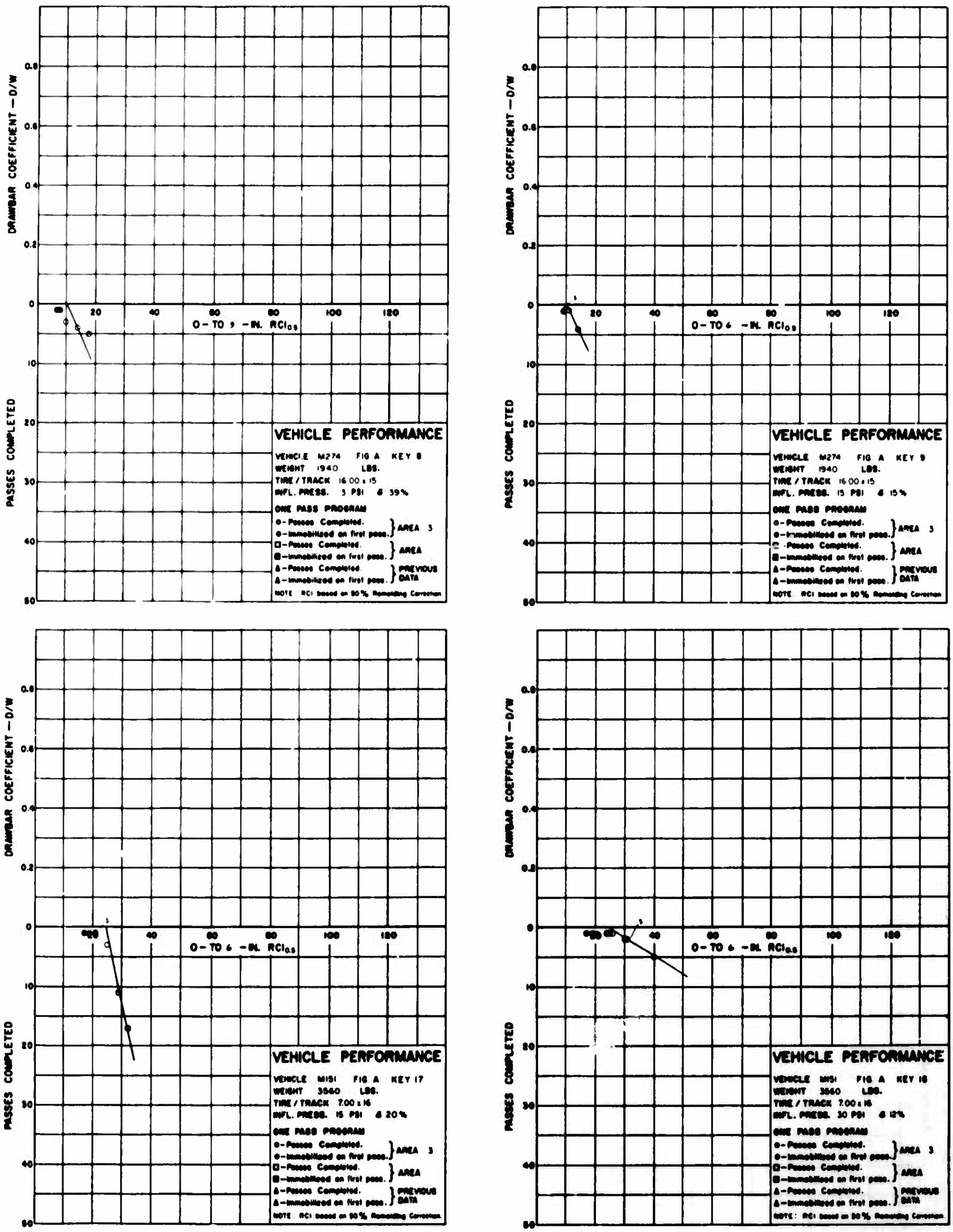

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0.8
0.6
0.4
0.2
0
10
20
30
40
50
20
40
60
80
100
120
O-TO 9 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 8
WEIGHT 1940 LBS.
TIRE / TRACK 16.00 x 15
INFL. PRESS. 5 PSI & 39%
ONE PASS PROGRAM
o-Passes Completed.
•-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction
O-TO 6 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY 9
WEIGHT 1940 LBS.
TIRE / TRACK 16.00 x 15
INFL. PRESS. 15 PSI & 15%
VEHICLE PERFORMANCE
VEHICLE M151 FIG A KEY 17
WEIGHT 3560 LBS.
TIRE / TRACK 7.00 x 16
INFL. PRESS. 15 PSI & 20%
VEHICLE PERFORMANCE
VEHICLE M151 FIG A KEY 18
WEIGHT 3560 LBS.
TIRE / TRACK 7.00 x 16
INFL. PRESS. 30 PSI & 12%

Fig. IV-3

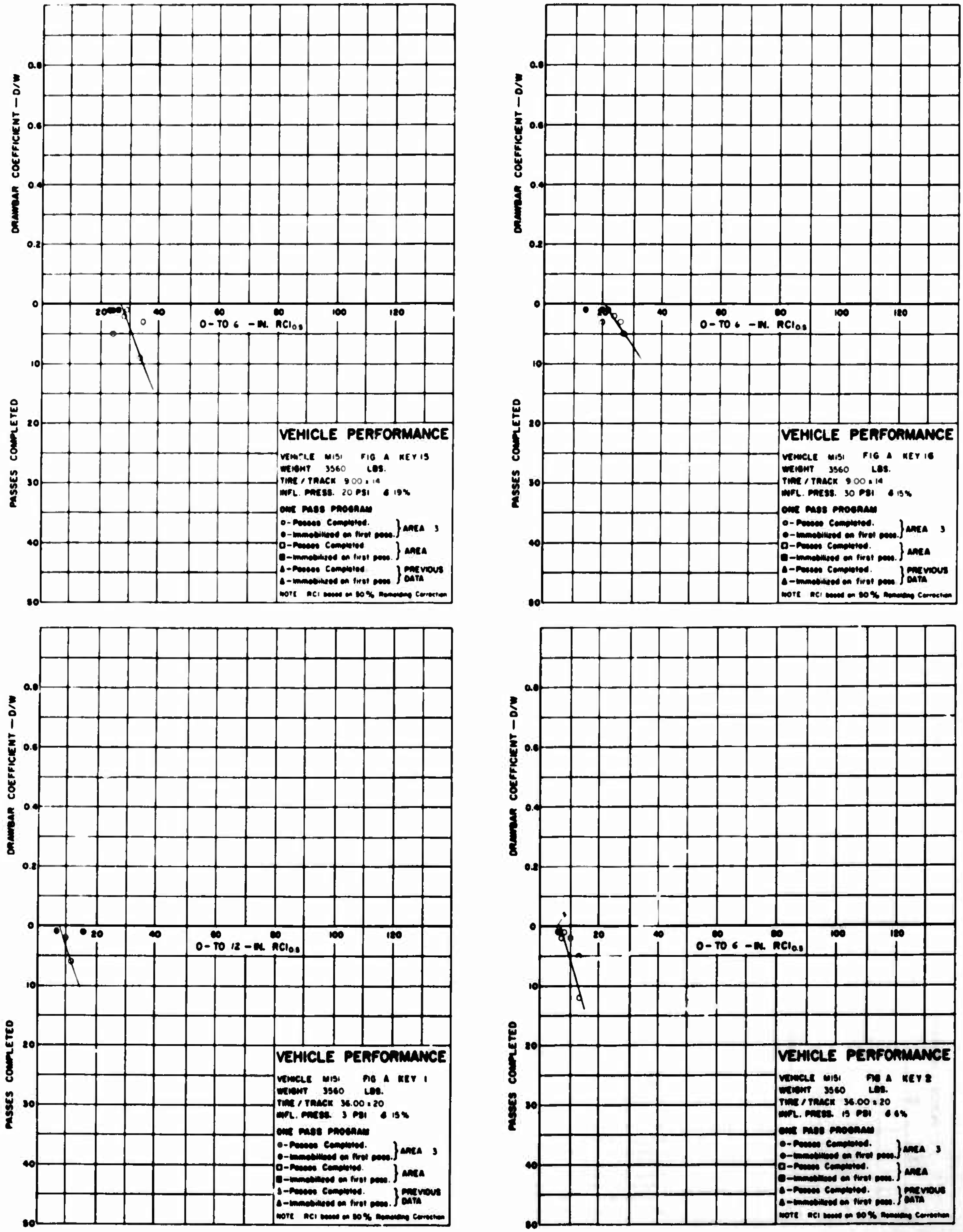

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0-TO 6 -IN. $RCI_{0.5}$
VEHICLE PERFORMANCE
VEHICLE M151 FIG A KEY 15
WEIGHT 3560 LBS.
TIRE / TRACK 9.00 x 14
INFL. PRESS. 20 PSI 19%
VEHICLE M151 FIG A KEY 16
WEIGHT 3560 LBS.
TIRE / TRACK 9.00 x 14
INFL. PRESS. 30 PSI 15%
0-TO 12 -IN. $RCI_{0.5}$
VEHICLE M151 FIG A KEY 1
WEIGHT 3560 LBS.
TIRE / TRACK 36.00 x 20
INFL. PRESS. 3 PSI 15%
VEHICLE M151 FIG A KEY 2
WEIGHT 3560 LBS.
TIRE / TRACK 36.00 x 20
INFL. PRESS. 15 PSI 6%
ONE PASS PROGRAM
○-Passes Completed.
●-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
△-Passes Completed.
▲-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 90% Remolding Correction

Fig. IV-4

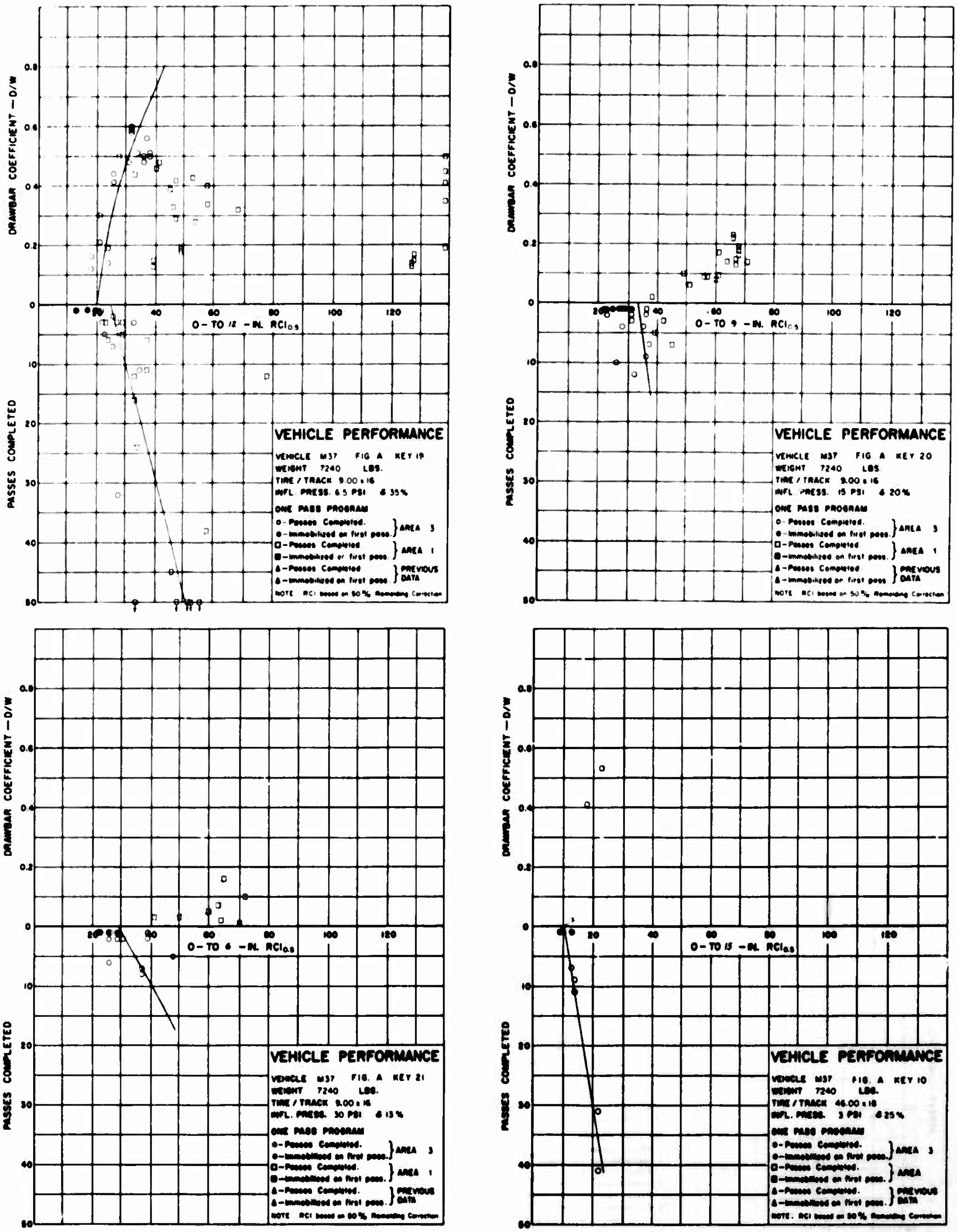
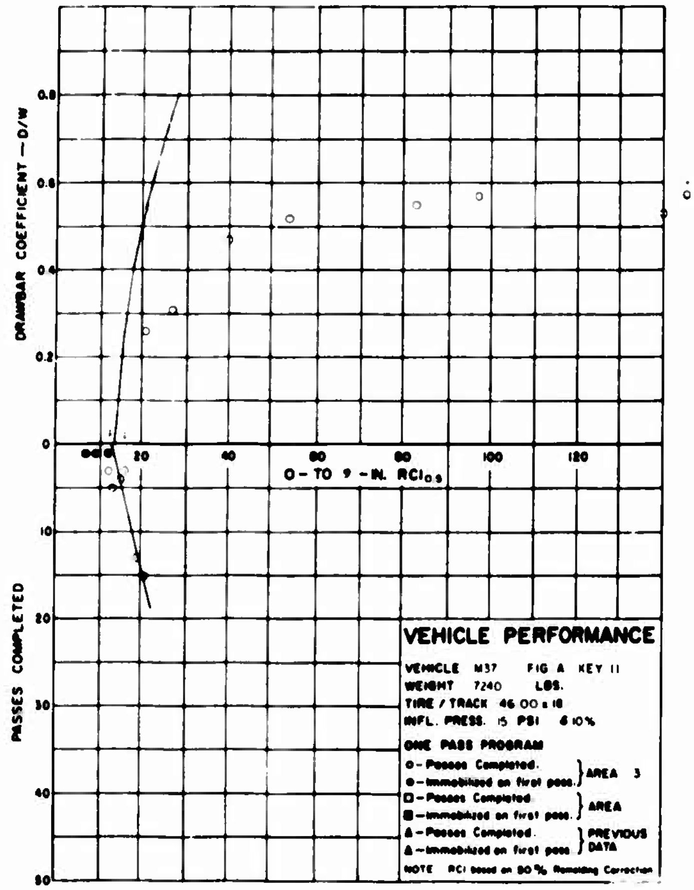
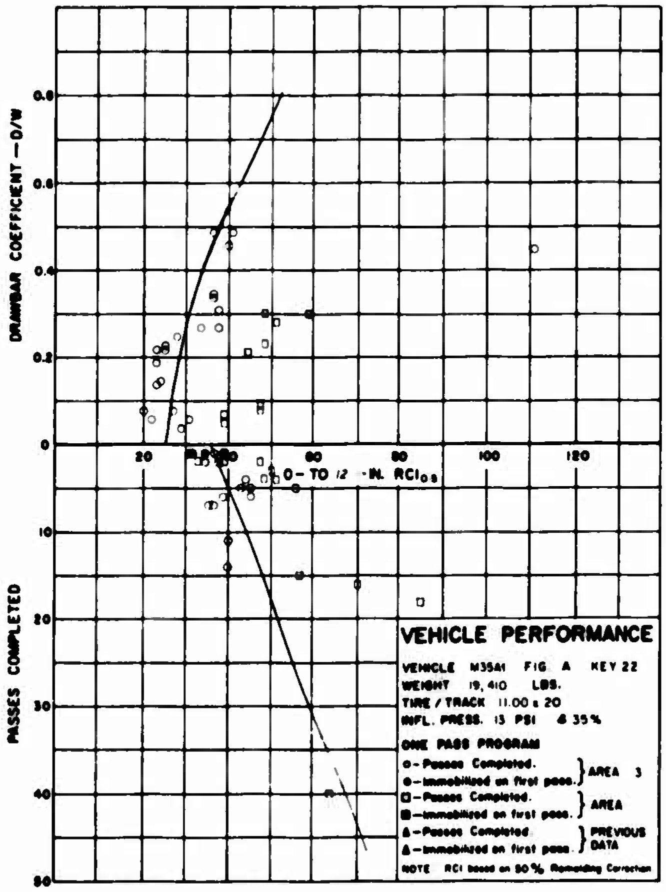

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 12 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M37 FIG A KEY 19
WEIGHT 7240 LBS.
TIRE / TRACK 9.00 x 16
INFL. PRESS. 6.5 PSI & 35%
ONE PASS PROGRAM
o – Passes Completed. ● – Immobilized on first pass. } AREA 3
□ – Passes Completed ■ – Immobilized on first pass. } AREA 1
Δ – Passes Completed ▲ – Immobilized on first pass } PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction
DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 9 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M37 FIG A KEY 20
WEIGHT 7240 LBS.
TIRE / TRACK 9.00 x 16
INFL. PRESS. 15 PSI & 20%
ONE PASS PROGRAM
o – Passes Completed. ● – Immobilized on first pass. } AREA 3
□ – Passes Completed ■ – Immobilized on first pass. } AREA 1
Δ – Passes Completed ▲ – Immobilized on first pass } PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction
DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 6 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M37 FIG. A KEY 21
WEIGHT 7240 LBS.
TIRE / TRACK 9.00 x 16
INFL. PRESS. 30 PSI & 13%
ONE PASS PROGRAM
o – Passes Completed. ● – Immobilized on first pass. } AREA 3
□ – Passes Completed. ■ – Immobilized on first pass. } AREA 1
Δ – Passes Completed. ▲ – Immobilized on first pass. } PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction
DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 – TO 15 – IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M37 FIG. A KEY 10
WEIGHT 7240 LBS.
TIRE / TRACK 46.00 x 18
INFL. PRESS. 3 PSI & 25%
ONE PASS PROGRAM
o – Passes Completed. ● – Immobilized on first pass. } AREA 3
□ – Passes Completed. ■ – Immobilized on first pass. } AREA
Δ – Passes Completed. ▲ – Immobilized on first pass. } PREVIOUS DATA
NOTE. RCI based on 50% Remolding Correction

Fig. IV-5


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0- TO 9 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M37 FIG A KEY 11
WEIGHT 7240 LBS.
TIRE / TRACK 46.00 x 16
INFL. PRESS. 15 PSI & 10%
ONE PASS PROGRAM
o-Passes Completed.
o-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
Δ-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0- TO 12 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M35A1 FIG A KEY 22
WEIGHT 19,410 LBS.
TIRE / TRACK 11.00 x 20
INFL. PRESS. 13 PSI & 35%
ONE PASS PROGRAM
o-Passes Completed.
o-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA
Δ-Passes Completed.
Δ-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction

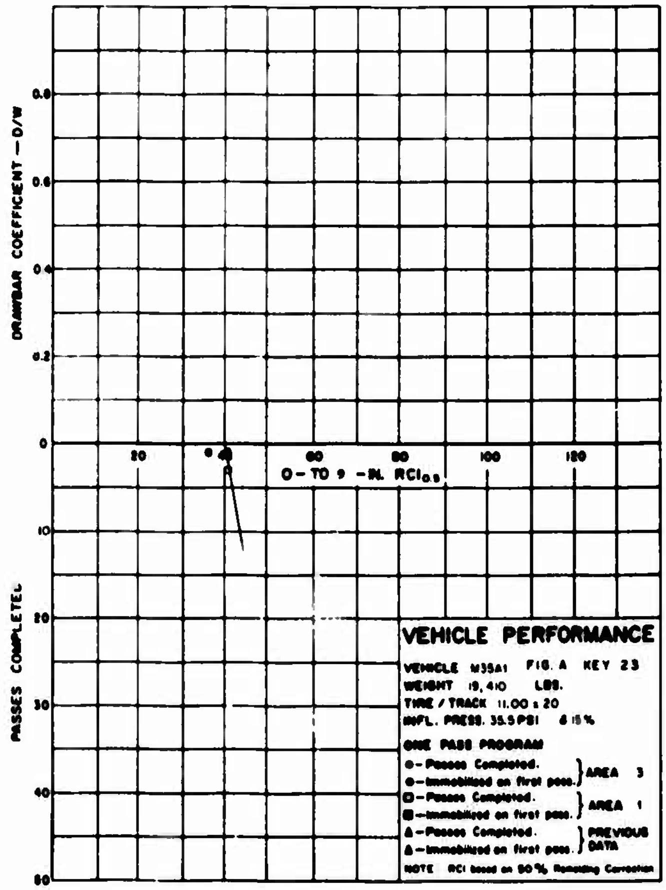

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0- TO 9 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M35A1 FIG. A KEY 23
WEIGHT 19,410 LBS.
TIRE / TRACK 11.00 x 20
INFL. PRESS. 35.5 PSI & 15%
ONE PASS PROGRAM
o-Passes Completed.
o-Immobilized on first pass.
AREA 3
□-Passes Completed.
■-Immobilized on first pass.
AREA 1
Δ-Passes Completed.
Δ-Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction

Fig. IV-6

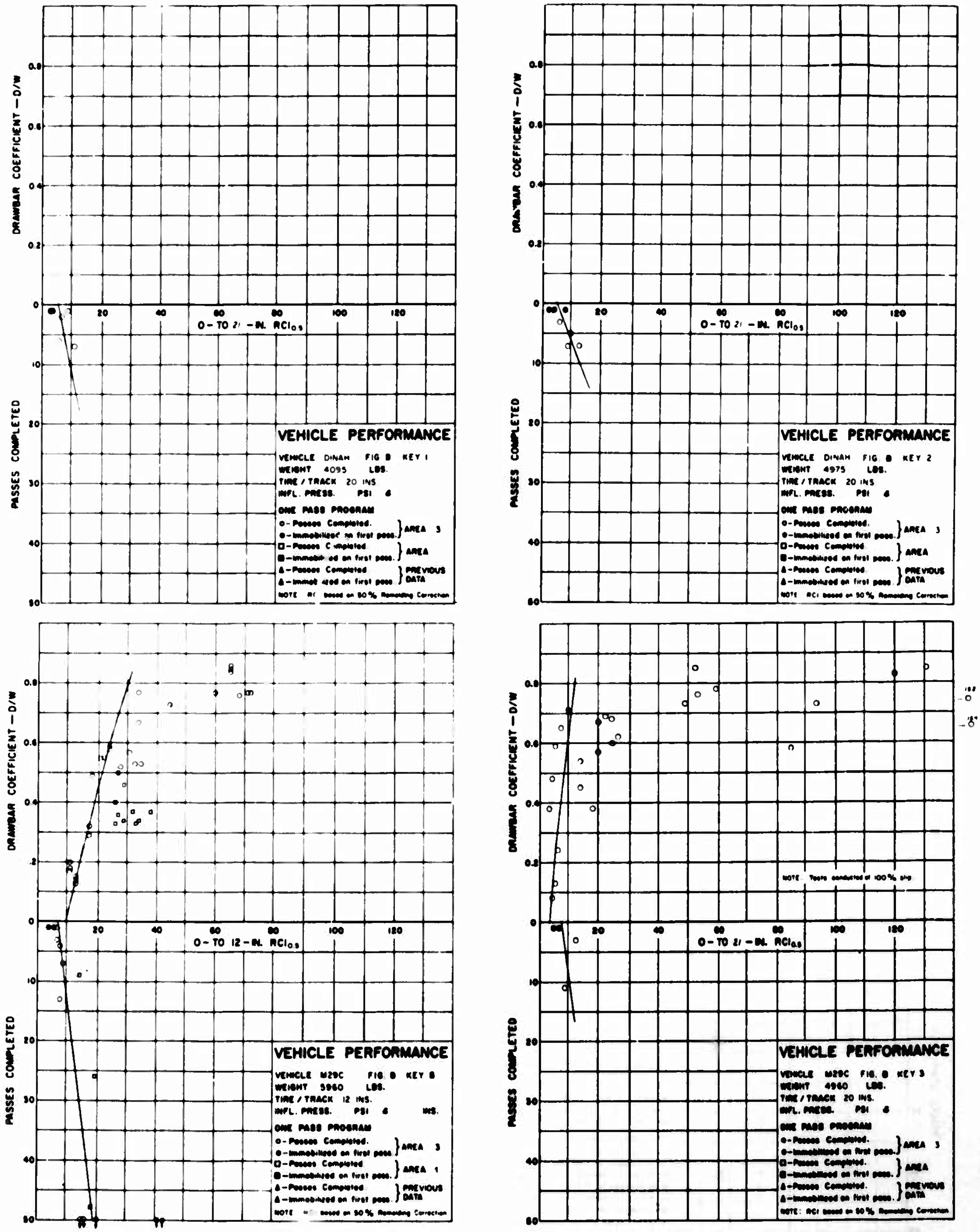

VEHICLE PERFORMANCE
VEHICLE DINAH FIG B KEY 1
WEIGHT 4095 LBS.
TIRE / TRACK 20 INS
INFL. PRESS. PSI 4
ONE PASS PROGRAM
O - TO 21 - IN. RCI0.5
DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
VEHICLE PERFORMANCE
VEHICLE DINAH FIG B KEY 2
WEIGHT 4975 LBS.
TIRE / TRACK 20 INS
INFL. PRESS. PSI 4
ONE PASS PROGRAM
VEHICLE PERFORMANCE
VEHICLE M29C FIG. B KEY 8
WEIGHT 5960 LBS.
TIRE / TRACK 12 INS.
INFL. PRESS. PSI 4 INS.
ONE PASS PROGRAM
O - TO 12 - IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M29C FIG. B KEY 3
WEIGHT 4960 LBS.
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
NOTE: Tests conducted at 100% slip
O-Passes Completed.
⊖-Immobilized on first pass.
AREA 3
□-Passes Completed.
▣-Immobilized on first pass.
AREA
Δ-Passes Completed.
Δ-Immobilized on first pass.
PREVIOUS DATA
NOTE: RCI based on 50% Remolding Correction

Fig. IV-7

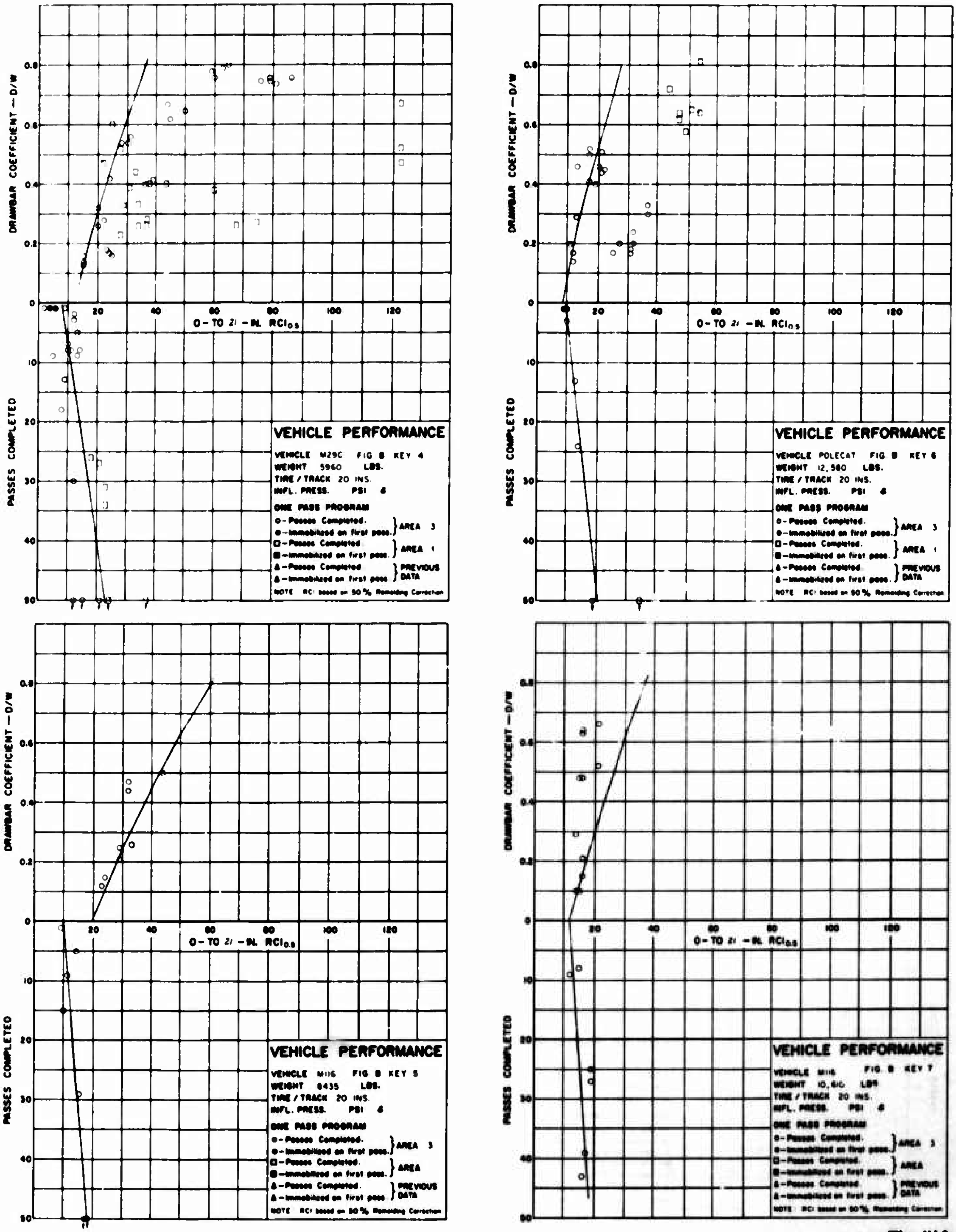
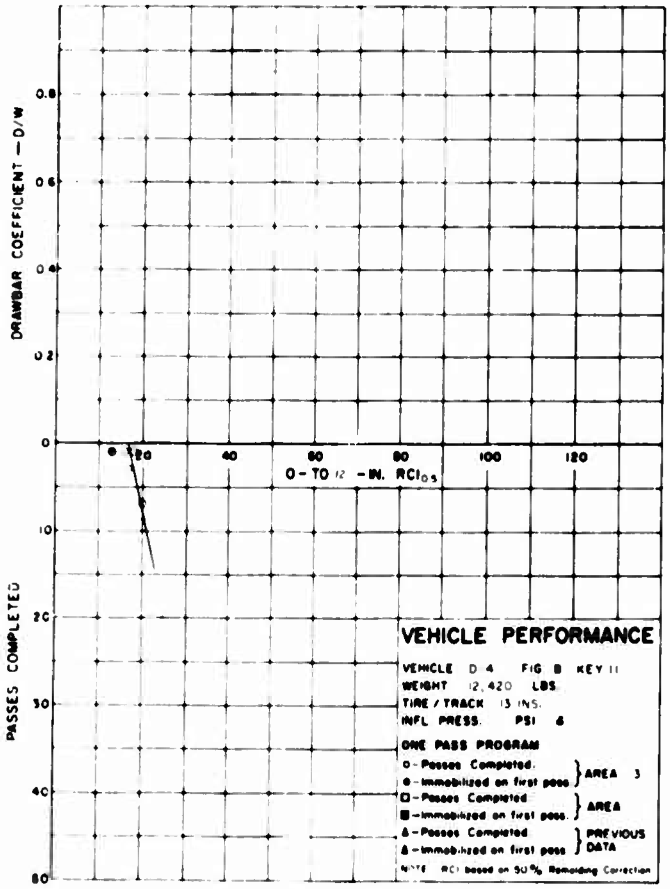
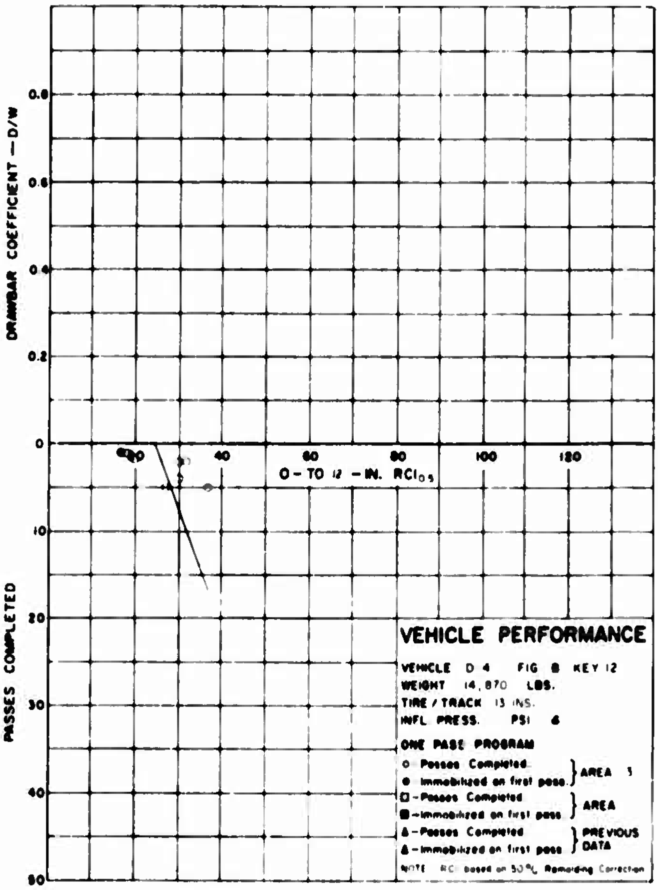
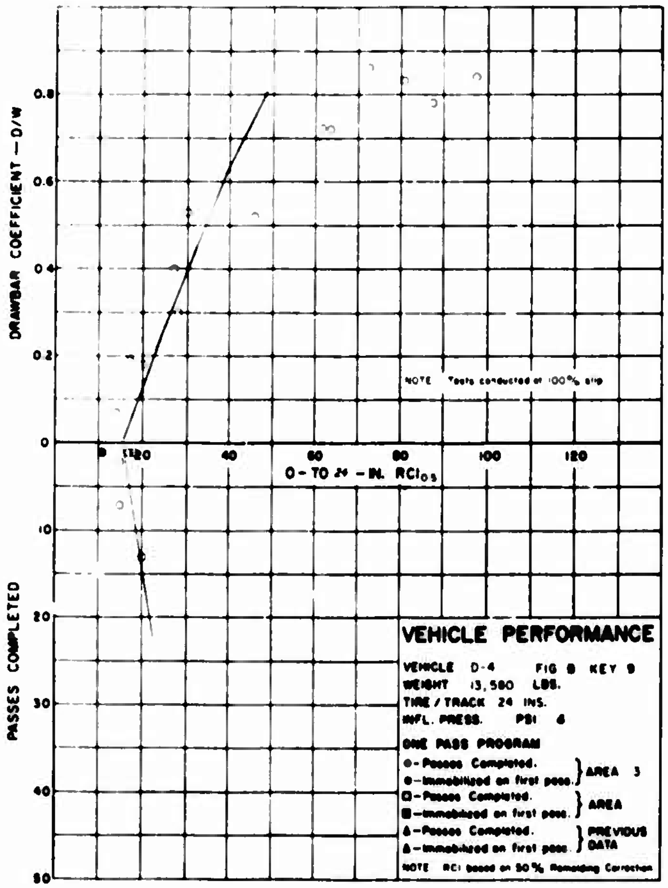

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0- TO 21 -IN. RCI0.5
VEHICLE PERFORMANCE
VEHICLE M29C FIG 8 KEY 4
WEIGHT 5960 LBS.
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
VEHICLE POLECAT FIG 8 KEY 6
WEIGHT 12,580 LBS.
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
VEHICLE M116 FIG 8 KEY 5
WEIGHT 8435 LBS.
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
VEHICLE M116 FIG 8 KEY 7
WEIGHT 10,610 LBS
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
o - Passes Completed.
o - Immobilized on first pass.
AREA 3
□ - Passes Completed.
■ - Immobilized on first pass.
AREA 1
Δ - Passes Completed.
Δ - Immobilized on first pass
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction

Fig. IV-8


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 - TO 12 - IN. RCI05
VEHICLE PERFORMANCE
VEHICLE D-4 FIG B KEY 11
WEIGHT 12,420 LBS.
TIRE / TRACK 13 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
NOTE RCI based on 50% Remolding Correction


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 - TO 12 - IN. RCI05
VEHICLE PERFORMANCE
VEHICLE D-4 FIG B KEY 12
WEIGHT 14,870 LBS.
TIRE / TRACK 13 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
NOTE RCI based on 50% Remolding Correction


DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 - TO 24 - IN. RCI05
NOTE Tests conducted at 100% slip
VEHICLE PERFORMANCE
VEHICLE D-4 FIG B KEY 9
WEIGHT 13,580 LBS.
TIRE / TRACK 24 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
NOTE RCI based on 50% Remolding Correction

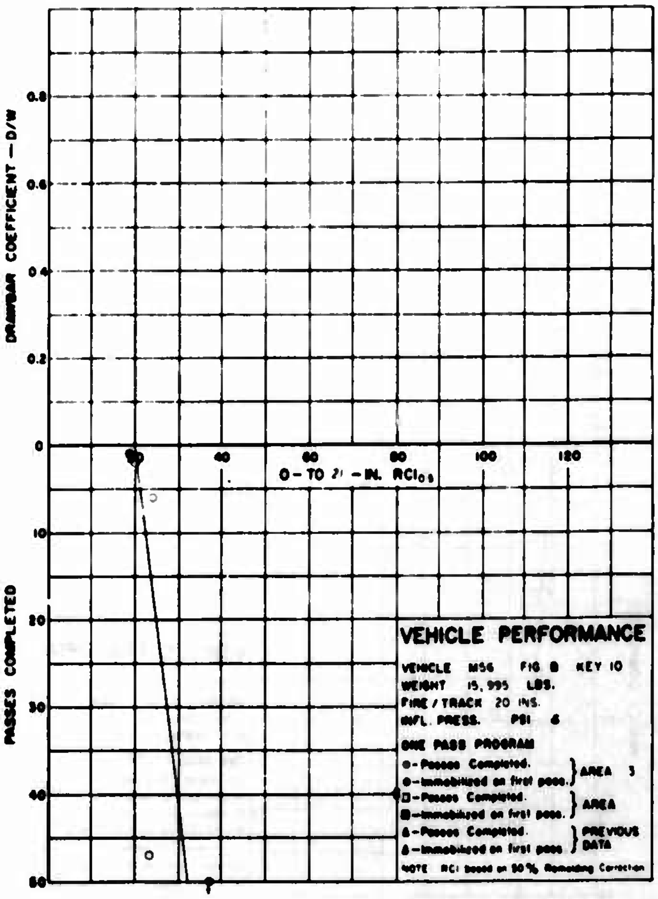

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0 - TO 21 - IN. RCI05
VEHICLE PERFORMANCE
VEHICLE M56 FIG B KEY 10
WEIGHT 15,995 LBS.
TIRE / TRACK 20 INS.
INFL. PRESS. PSI 4
ONE PASS PROGRAM
NOTE RCI based on 50% Remolding Correction

Fig. IV-9

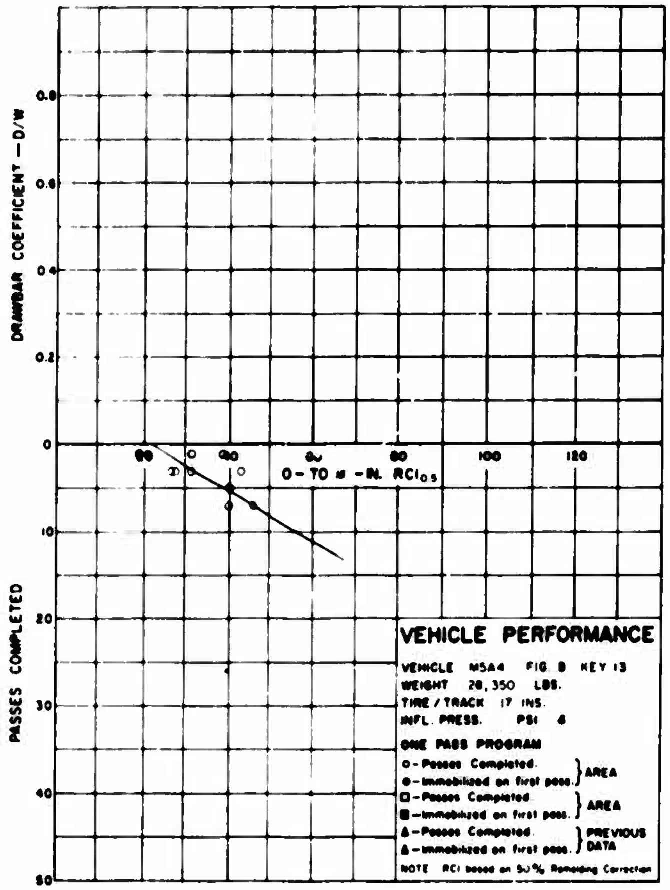

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0.8
0.6
0.4
0.2
0
10
20
30
40
50
80
100
120
VEHICLE PERFORMANCE
VEHICLE M5A4 FIG. 8 KEY 13
WEIGHT 28,350 LBS.
TIRE / TRACK 17 INS.
INFL. PRESS. PSI 6
ONE PASS PROGRAM
○ - Passes Completed.
● - Immobilized on first pass.
AREA
□ - Passes Completed.
■ - Immobilized on first pass.
AREA
△ - Passes Completed.
▲ - Immobilized on first pass.
PREVIOUS DATA
NOTE RCI based on 50% Remolding Correction

Fig. IV-10

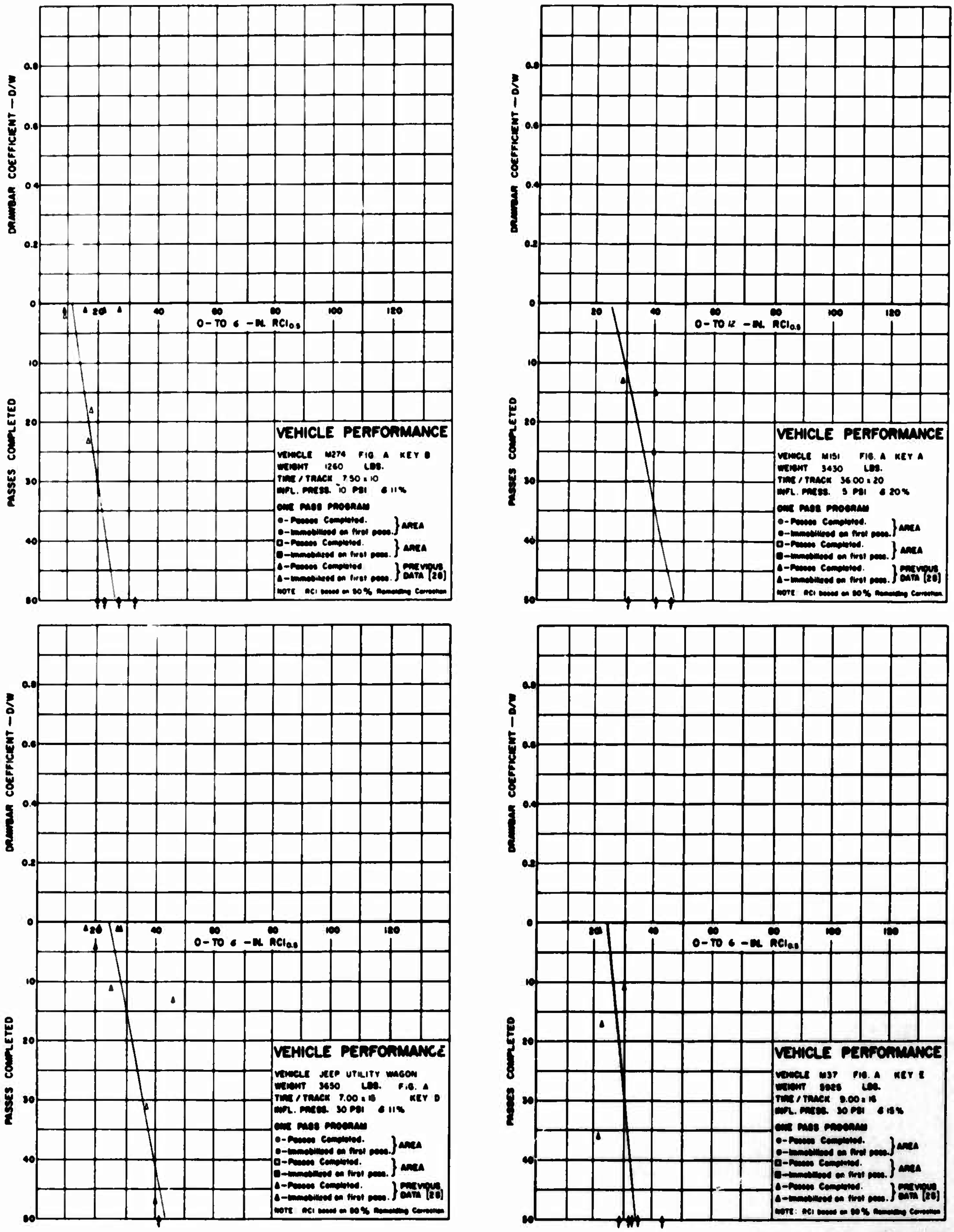

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0-TO 6 -IN. $RCI_{0.5}$
VEHICLE PERFORMANCE
VEHICLE M274 FIG A KEY B
WEIGHT 1260 LBS.
TIRE / TRACK 7.50 x 10
INFL. PRESS. 10 PSI & 11%
ONE PASS PROGRAM
PREVIOUS DATA (26)
NOTE RCI based on 50% Remolding Correction
0-TO 12 -IN. $RCI_{0.5}$
VEHICLE M151 FIG. A KEY A
WEIGHT 3430 LBS.
TIRE / TRACK 36.00 x 20
INFL. PRESS. 5 PSI & 20%
VEHICLE JEEP UTILITY WAGON
WEIGHT 3650 LBS. FIG. A
TIRE / TRACK 7.00 x 16 KEY D
INFL. PRESS. 30 PSI & 11%
VEHICLE M37 FIG. A KEY E
TIRE / TRACK 9.00 x 16
INFL. PRESS. 30 PSI & 15%

Fig. IV-11

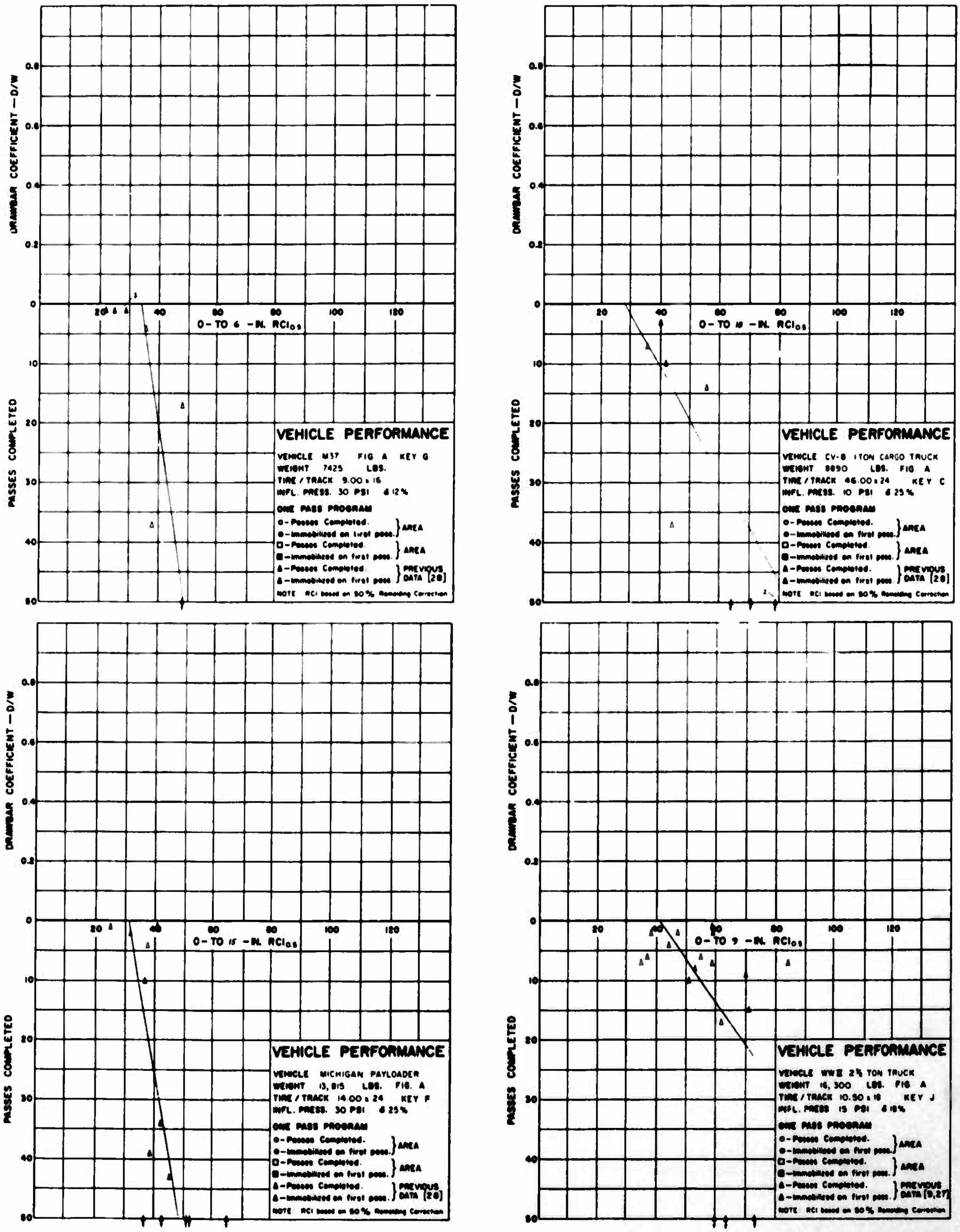
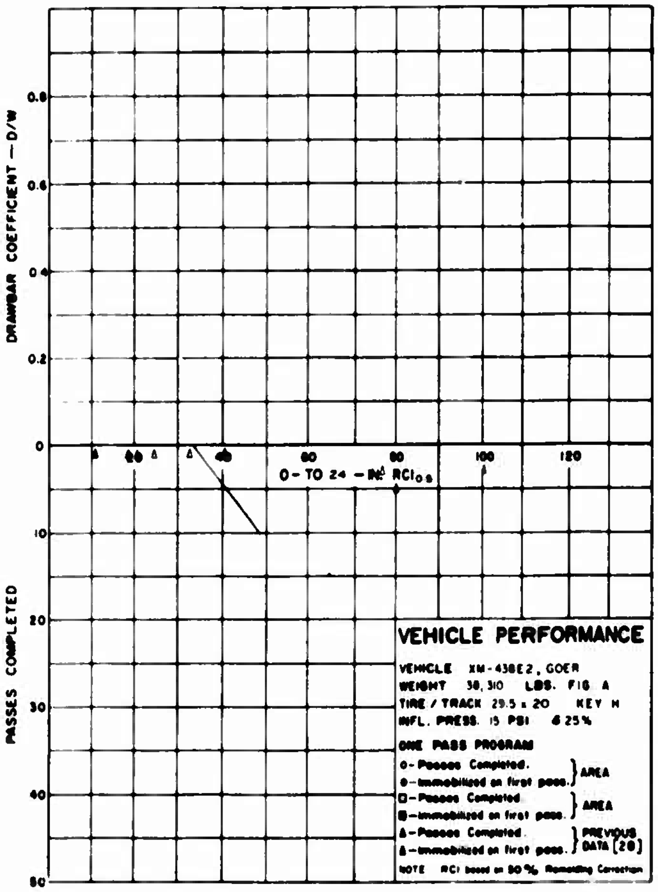

DRAWBAR COEFFICIENT — D/W
PASSES COMPLETED
0- TO 6 -IN. RCIos
VEHICLE PERFORMANCE
VEHICLE M37 FIG A KEY G
WEIGHT 7425 LBS.
TIRE / TRACK 9.00 x 16
INFL. PRESS. 30 PSI 6 12%
ONE PASS PROGRAM
○-Passes Completed. } AREA
●-Immobilized on first pass.
□-Passes Completed. } AREA
■-Immobilized on first pass.
△-Passes Completed. } PREVIOUS DATA [28]
▲-Immobilized on first pass.
NOTE RCI based on 50% Remolding Correction
0- TO 18 -IN. RCIos
VEHICLE PERFORMANCE
VEHICLE CV-8 1 TON CARGO TRUCK
WEIGHT 8890 LBS. FIG A
TIRE / TRACK 46.00 x 24 KEY C
INFL. PRESS. 10 PSI 6 25%
ONE PASS PROGRAM
○-Passes Completed. } AREA
●-Immobilized on first pass.
□-Passes Completed. } AREA
■-Immobilized on first pass.
△-Passes Completed. } PREVIOUS DATA [28]
▲-Immobilized on first pass.
NOTE RCI based on 50% Remolding Correction
0- TO 15 -IN. RCIos
VEHICLE PERFORMANCE
VEHICLE MICHIGAN PAYLOADER
WEIGHT 13,815 LBS. FIG. A
TIRE / TRACK 14.00 x 24 KEY F
INFL. PRESS. 30 PSI 6 25%
ONE PASS PROGRAM
○-Passes Completed. } AREA
●-Immobilized on first pass.
□-Passes Completed. } AREA
■-Immobilized on first pass.
△-Passes Completed. } PREVIOUS DATA [28]
▲-Immobilized on first pass.
NOTE RCI based on 50% Remolding Correction
0- TO 9 -IN. RCIos
VEHICLE PERFORMANCE
VEHICLE WW II 2½ TON TRUCK
WEIGHT 16,300 LBS. FIG A
TIRE / TRACK 10.50 x 16 KEY J
INFL. PRESS 15 PSI 6 18%
ONE PASS PROGRAM
○-Passes Completed. } AREA
●-Immobilized on first pass.
□-Passes Completed. } AREA
■-Immobilized on first pass.
△-Passes Completed. } PREVIOUS DATA [9,27]
▲-Immobilized on first pass.
NOTE RCI based on 50% Remolding Correction

Fig. IV-12


DRAWBAR COEFFICIENT — D/W
0.8
0.6
0.4
0.2
0
10
20
30
40
50
PASSES COMPLETED
40
60
80
100
120
0 - TO 24 - IN. $RCI_{0.5}$
VEHICLE PERFORMANCE
VEHICLE XM-438E2, GOER
WEIGHT 38,310 LBS. FIG. A
TIRE / TRACK 29.5 x 20 KEY H
INFL. PRESS. 15 PSI @ 25%
ONE PASS PROGRAM
○ - Passes Completed.
● - Immobilized on first pass.
AREA
□ - Passes Completed.
■ - Immobilized on first pass.
AREA
△ - Passes Completed.
▲ - Immobilized on first pass.
PREVIOUS DATA (28)
NOTE RCI based on 50% Remolding Correction

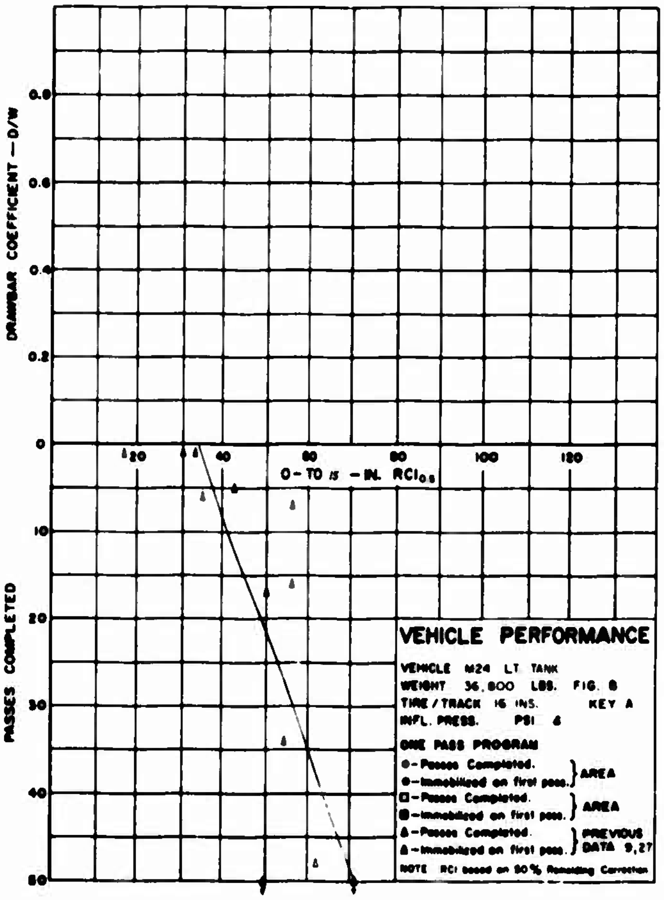

DRAWBAR COEFFICIENT — D/W
0.8
0.6
0.4
0.2
0
10
20
30
40
50
PASSES COMPLETED
20
40
60
80
100
120
0 - TO 15 - IN. $RCI_{0.5}$
VEHICLE PERFORMANCE
VEHICLE M24 LT. TANK
WEIGHT 36,800 LBS. FIG. B
TIRE / TRACK 16 INS. KEY A
INFL. PRESS. PSI 4
ONE PASS PROGRAM
○ - Passes Completed.
● - Immobilized on first pass.
AREA
□ - Passes Completed.
■ - Immobilized on first pass.
AREA
△ - Passes Completed.
▲ - Immobilized on first pass.
PREVIOUS DATA 9,27
NOTE RCI based on 50% Remolding Correction

Fig. IV-13

APPENDIX V

AN APPROXIMATION FOR THE EFFECT OF SHAFT SIZE UPON CONE INDEX MEASUREMENTS

Approximately half way through the test program, it was decided by WES to modify the shaft diameter of the standard WES cone penetrometer. The instrument in use until this time had a 5/8" diameter shaft, and it was strongly suspected that shaft drag during deep penetration in weak soils was contributing significantly to the resistance to penetration being measured (at the top of the shaft), and previously presumed to be cone resistance. Accordingly, shaft diameter was reduced to 3/8". It was desired to express the results of this study in terms of measurements of the new standard instrument. In order to do so, *both* instruments were used side-by-side for the remainder of the program.

The results of these simultaneous tests are shown in Figures V-1-5, in which the indications at both Lake Centennial and Grenada Lake of the instrument with the 5/8" diameter shaft are plotted as functions of measurements with the new standard instrument for the 0-6", 3-9", 6-12", 9-15", and 12-18" layers, respectively. While there is considerable scatter, the following approximate relationships, plotted in the appropriate figures, appear reasonable:

for layer	0-6"	$CI_{3/8} = CI_{5/8} - 0$
	3-9"	$CI_{3/8} = CI_{5/8} - 3$
	6-12"	$CI_{3/8} = CI_{5/8} - 6$
	9-15"	$CI_{3/8} = CI_{5/8} - 9$
	12-18"	$CI_{3/8} = CI_{5/8} - 12$

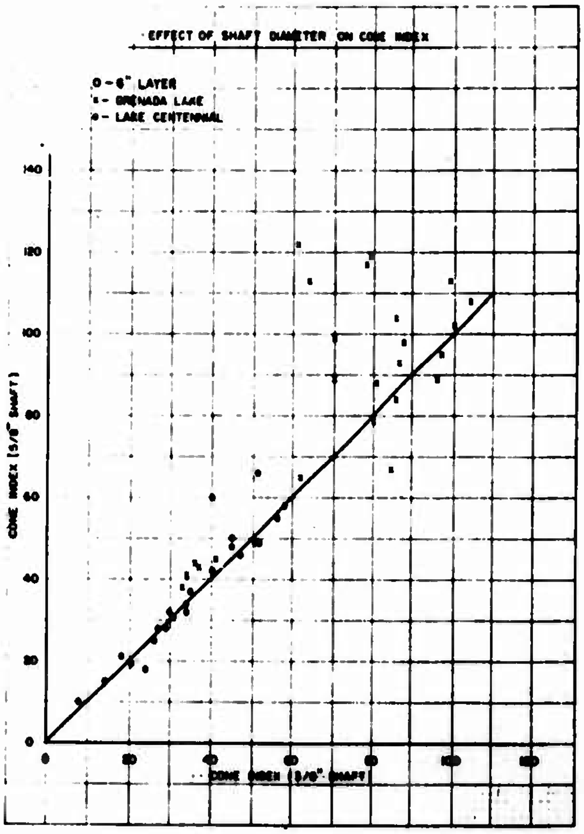


Fig. V-1

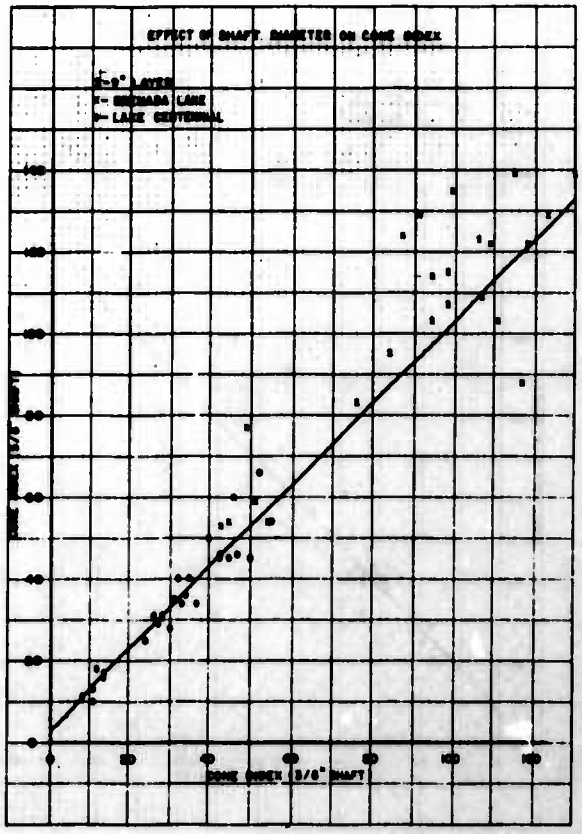


Fig. V-2

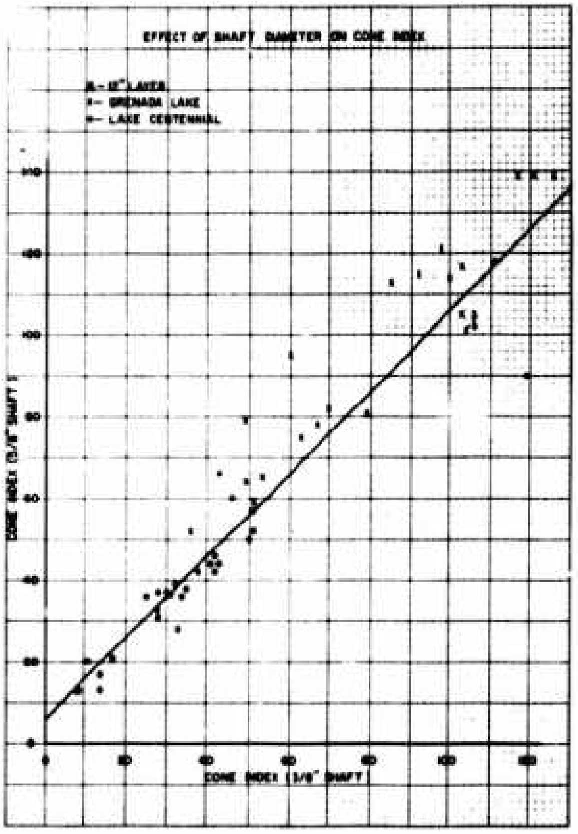


Fig. V-3

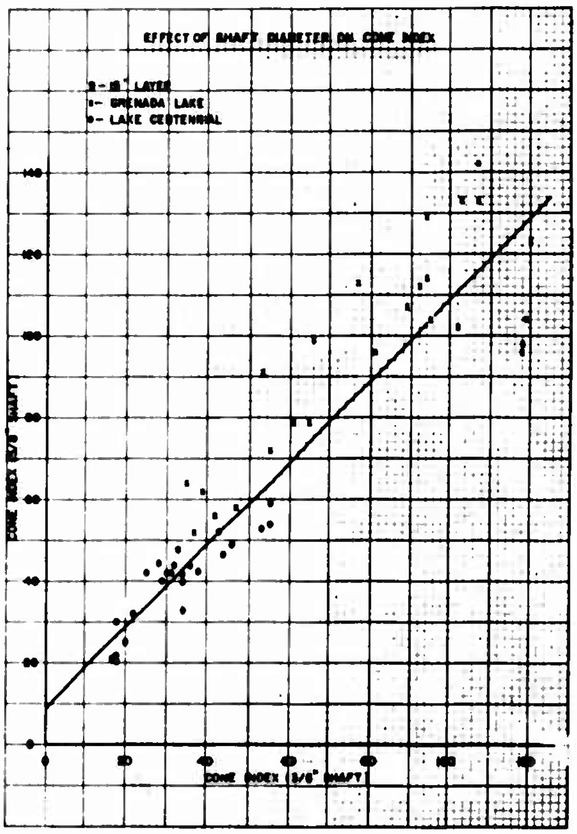


Fig. V-4

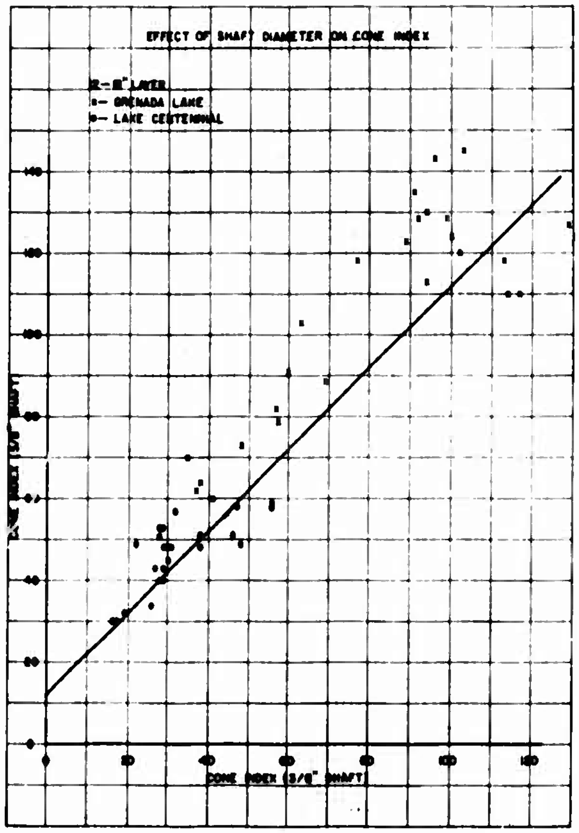


Fig. V-5

All test data obtained prior to the introduction of the 3/8" shaft instrument were "corrected" as indicated before being used in the analyses conducted as part of this program.

APPENDIX VI

THE RELATIONSHIP OF CONE INDEX TO SOIL DIRECT SHEAR STRENGTH

It is recognized that a vehicle develops traction in soils through direct shearing action of the soil at the mechanical vehicle/soil interface and/or through friction and/or adhesion between the vehicle running gear and the soil. Accordingly, a relationship between soil direct shear properties and cone indices is useful in the context of this study.

Traction (T) is conventionally treated in terms of Micklethwait's [10]* adaptation of Coulomb's equation

$$T = S\ [c + q_n \tan \phi] \qquad (1)$$

where S = contact area

q_n = nominal unit ground pressure

c = effective soil cohesion

and ϕ = effective soil angle of internal friction

or, where, because of the running gear design, shear failure occurs at the soil/gear interface rather than within the soil, by

$$T = S\ [a + q_n \cdot f] \qquad (2)$$

where a = soil to gear material adhesion

and f = soil to gear material friction.

An aggressive track will develop traction according to eq. (1); a smooth track or tire, according to eq. (2). A normally aggressive off-road tire, or a track with substantial road pads, will develop part of its traction via eq. (1), part by eq. (2), in accordance with the distribution of its total effective contact area between soil trapping and smooth elements.

On the usual assumption that the cone index expresses directly the bearing capacity of a frictionless, weightless, plastic soil, the relationship between cone index and soil direct shear strength becomes, for flat plate and at the surface, according to plasticity theory [*cf.* 15]

$$CI \simeq 5.7\ c$$

where c = soil cohesion (psi)

*See References, p. 33 in main body of report.

Evans [16] has published results from tests in heavy plastic clays indicating that

$$CI \simeq 5\ c\ ,$$

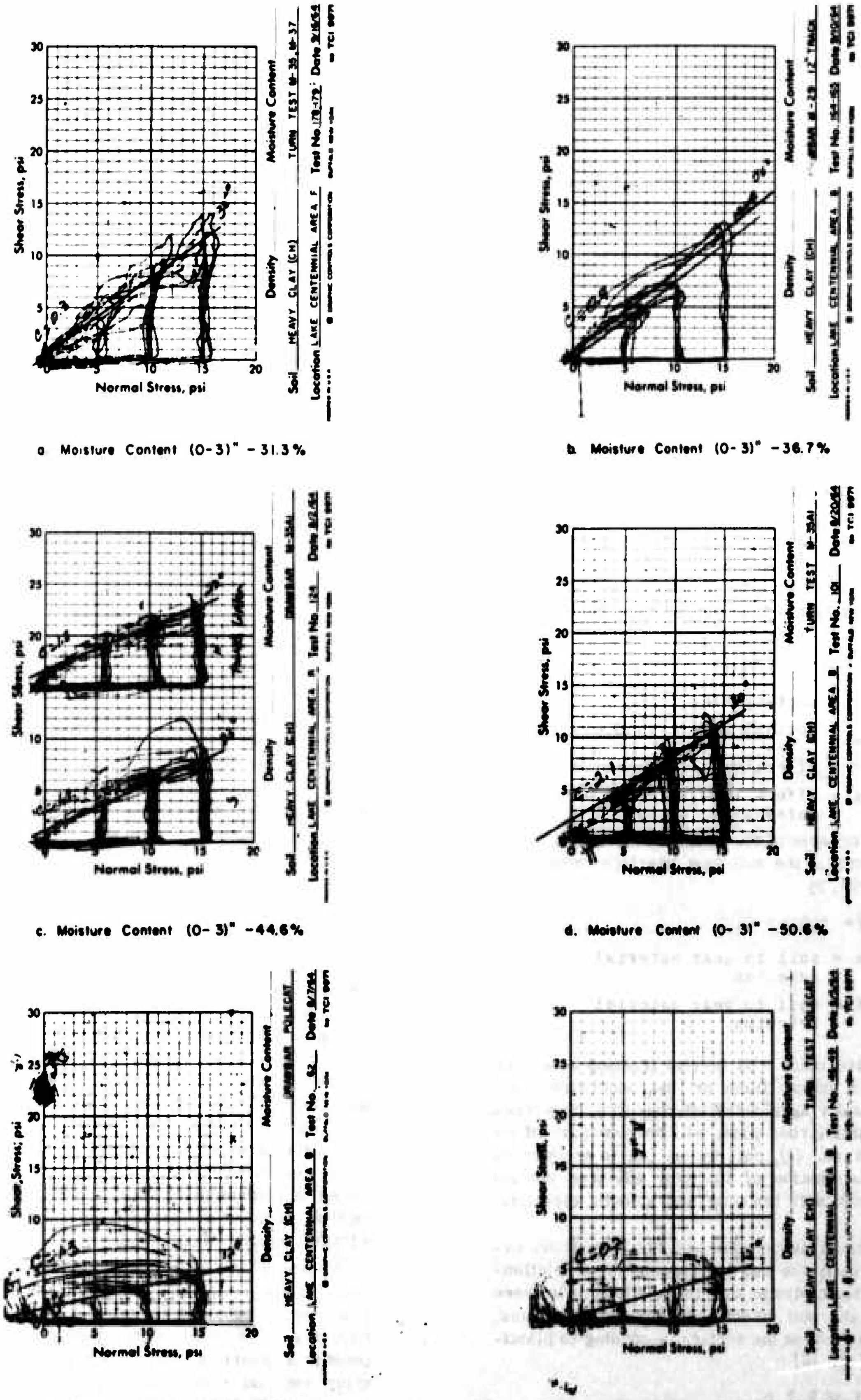
and Smith's [17] data, from tests in a wider range of fine-grained soils, suggests that

$$CI \simeq 12.5\ c\ .$$

Throughout the present study a Cohron sheargraph [5] was used to obtain direct shear parameters on surface soils encountered in the field program, and during a special series of "slipperiness" tests. Sheargraphs were also used in concurrent WES laboratory studies by Meyer [14] and by Smith [13]. In addition, Haley, of the ATAC Land Locomotion Laboratory, ran some side-by-side field tests with a bevameter [25] in the areas where some of the vehicle tests were run [26]. Comparative values from the bevameter and the sheargraph, obtained in prepared lanes used in the "slipperiness" tests, are given in Table VI-1. Except for the 10 July data, agreement between the two instruments on tan ϕ and f_r is good.

However, the most striking feature of these, and indeed all of the *in situ*, torsional shear measurements cited, is the clear dependence in "frictionless" soils of shearing resistance upon normal loading up to moisture contents of the order of the Atterberg liquid limit. Figure VI-1 shows a number of sheargraph records in the heavy Vicksburg buckshot clay (CH) at various moisture contents. Moreover, as illustrated in Table VI-1, the zero normal load intercepts were generally small in the sheargraph records (interpretable as apparent cohesion values of seldom more than 1 psi) and almost nonexistent in those of the LLL bevameter, which uses a larger, annular shear head.

A series of surface traction tests were undertaken to determine the degree to which the sheargraph could be used to predict drawbar pull performance. The tests were deliberately run under conditions where a thin layer of surface soil was made wet and weak, and the underlying soil body was kept sufficiently strong to permit the assumption that external motion resistance was nil, and hence that measured pull equaled traction. The procedure is described in the body of the report on page 13 and 14; the data are summarized in Table III-50



a. Moisture Content (0-3)" - 31.3%

b. Moisture Content (0-3)" - 36.7%

c. Moisture Content (0-3)" -44.6%

d. Moisture Content (0-3)" -50.6%

e. Moisture Content (0-3)" -56.8%

f. Moisture Content (0-3)" -61.4%

Cohron Sheargraph Records (2" groused vane shearhead) In Heavy Clay (CH)

Fig. VI-1

TABLE VI-1

Surface Direct Shear Parameters as Measured by the LLL Bevameter and the Cohron Sheargraph in Prepared Lanes

Date 1964	Course*	Condition**	Bevameter [26]			Sheargraph		
			$\tan \phi$	c psi	f_r***	$\tan \phi$	c psi	f_r***
6/23-25	1	F			0.22			0.16
6/26	2	F	0.27	0		0.23	1.5	
		D-1 hr.			0.22			0.19
6/30		D-12 hr.	0.25	0		0.21	0.8	
		D-16 hr.			0.33			0.25
7/1		D-48 hr.			0.25			0.33
7/6		D-2 hr.	0.25	0	0.25	0.25	0.8	0.25
7/10		D-24 hr.	0.30	0.11	0.31	0.60	0.9	0.51

*1 - Clayey Silt (ML)
2 - Heavy Clay (CH)

**F = Flood
D = Drained for x hrs.

***f_r = coefficient of friction of rubber on soil

The results showed the expected trends, but had considerable scatter, due to a number of factors:

1) the test courses were not ideally uniform;
2) the sheargraph shear head only sampled -- and averaged -- a very small area at one time;
3) the action of both the vehicle and the sheargraph when the surface layer was very weak and thin was not clearly in either the surface layer or in the hardpan;
4) in situations where the weak layer was somewhat thicker, the sheargraph appeared to operate more nearly in the indeterminate region between layers than did some of the vehicles; and
5) each of the vehicles had running gear which had both grousered and relatively smooth areas (which, of course, is common).

In the absence of sharper correlation with the proposed equations, it was decided to treat the sheargraph measurements simply as an *index* of surface soil shear strength. For this purpose, the measured shear strength (τ) at 10 psi average normal loading (σ), divided by the loading, was used; i.e.,

$$(\tau/\sigma)_{10}$$

where the subscript indicates the value of σ at which the ratio was evaluated.

This index showed a strong correlation with soil moisture content in the sampled layer, as would be expected. It also still had considerable scatter. In Figures VI-2-5, measured vehicle drawbar performance (D/W) and values of this index (for the grousered vane shear head or for the smooth rubber shear head, as appeared appropriate) are jointly plotted to the same scale as functions of moisture content of the surface soil. The results, while not exciting, indicate that the proposed index is related in useful degree to vehicle traction. They also clearly demonstrate that a weak or "slippery" surface layer can reduce performance as much as 80 percent from what would be expected from deep measurements made to determine the strength of the soil mass which supports the vehicle's weight.

As this study drew to a close, preliminary results from a concurrent WES study of the "slipperiness" problem, conducted with tires in the AMRB laboratory soil bins by Smith, became available [13]. Smith's findings were generally similar to those from the field tests. In Figure VI-6, $(\tau/\sigma)_{10}$ from Smith's tests is plotted as a function of moisture content in the surface soil layer, and in Figure VI-7, his measured (D/W) values with one, normal tire are plotted on the same basis. Once again the scatter in sheargraph results is large, but does not totally obscure what appears to be a usefully strong and direct correlation between the sheargraph index and measured traction.

On the strength of these demonstrations, a general correlation was sought between the index $(\tau/\sigma)_{10}$ as determined by sheargraph measurements, and cone index. Both extensive field data, in which cone penetrometer, sheargraph, and moisture content data were concurrently taken, and preliminary results of still another WES laboratory study by Meyer [14] were available for this.

Meyer's data showed, for carefully prepared, uniform, fully remolded samples of a large number of fine-grained soils, variations in cone index, in c and $\tan \phi$ as determined by the sheargraph (and in several other properties) as functions of moisture content. From these, the index $(\tau/\sigma)_{10}$ was calculated and correlated via moisture content to cone index. Figures VI-8 and VI-9 illustrate cone index and $(\tau/\sigma)_{10}$ respectively as functions of moisture content for one CH soil, as developed from Meyer's report. Figure VI-10 illustrates the resulting $(\tau/\sigma)_{10}$ versus CI relationship.

All of the curves developed in this way were similarly shaped, suggesting that a simple exponential decay curve of the form

$$(\tau/\sigma)_{10} = K_1 \left(1 - e^{-K_2 CI}\right) \qquad (3)$$

where K_1 and K_2 are curve fitting parameters, might usefully be fit to them. One such is shown in Figure VI-9. In order to investigate the possible importance of the deviation between the algebraic expression fitted and the original relationship, arbitrarily adjusted curves of $(\tau/\sigma)_{10}$ and (CI) were backplotted to the original data, with the results illustrated by the dotted lines in Figures VI-8 and VI-9. It was judged that such deviations were generally within the data scatter band.

Six additional fine-grained soils from Meyer's data were selected and similarly treated. The designation of each and its USCS classification, Atterberg limits, and the value of "K_2" [in eq. (3)] assigned, are tabulated in Table VI-2. Note that the constant "K_1" in eq. (3) was assigned the value of 1.0 in the course of these analyses. All of the soils did *not* approach this single value asymptotically. How-

TABLE VI-2

Soils from Meyer [14] to Which Curve $(\tau/\sigma)_{10} = (1 - e^{K_2 CI})$ Was Fit.

Soil Site	USCS Classification	Atterberg Limits		"K_2"
		PL	LL	
U.S. 7	CL	22	39	.022
U.S. 11	CH	30	71	.035
U.S. 9	CH	31	73	.019
U.S. 1	CH	30	66	.016
U.S. 2A	ML	27	45	.030
P.R. 1	MH	38	58	.023
U.S. 3	MH	77	89	.016

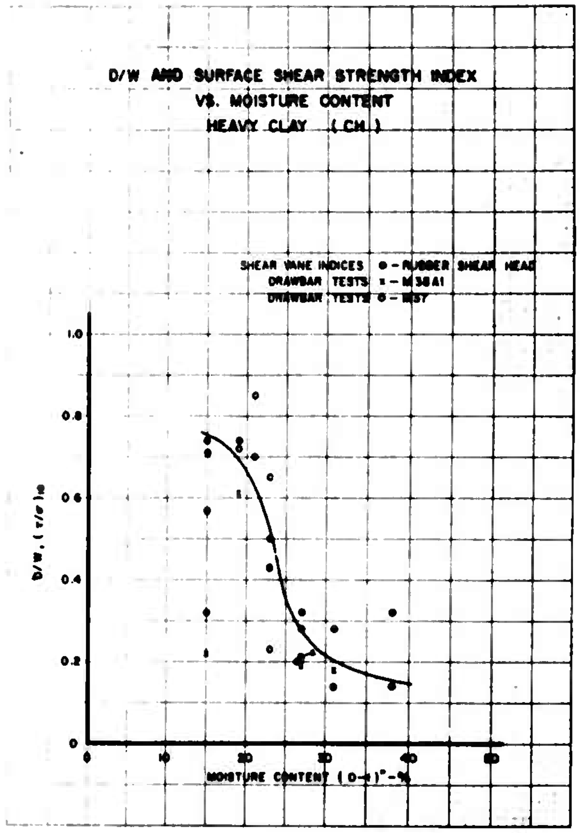


Fig. VI-2

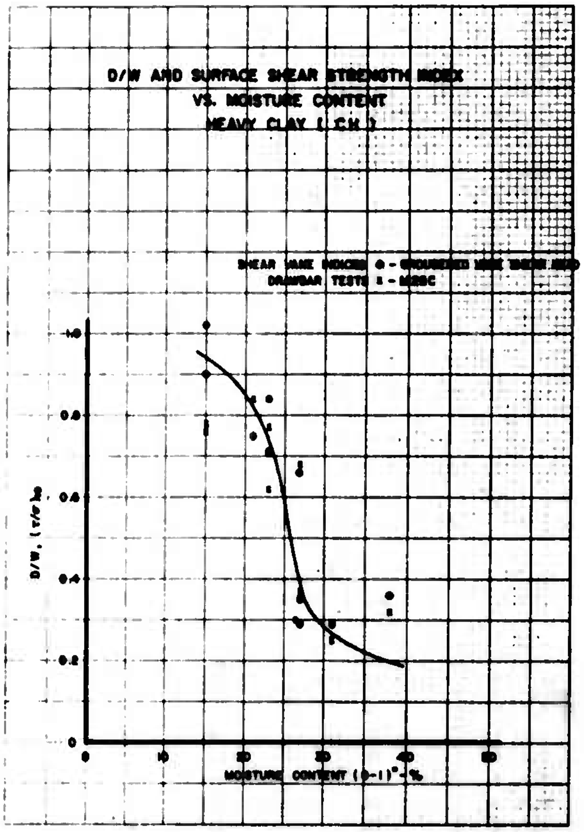


Fig. VI-3

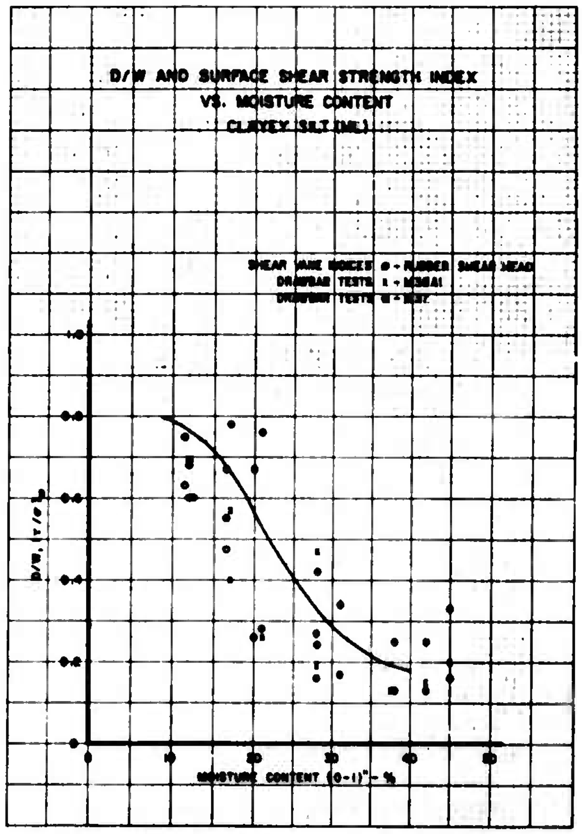


Fig. VI-4

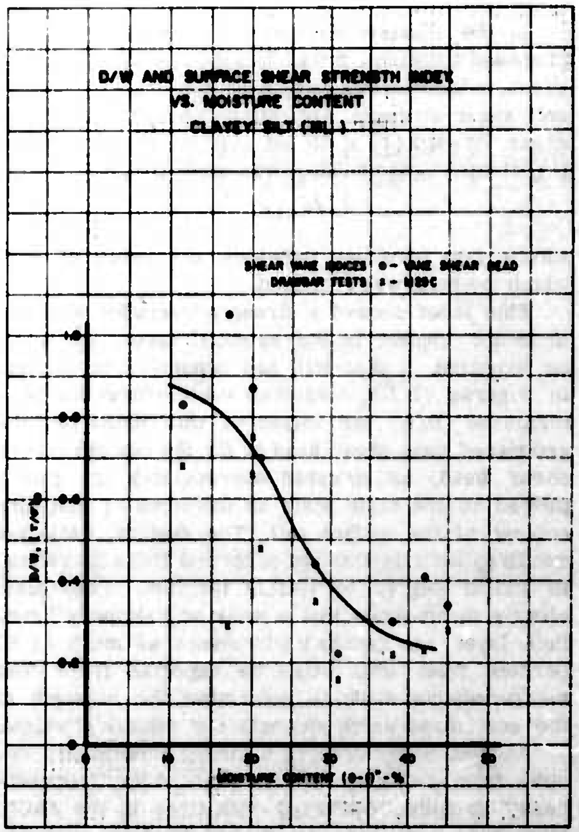


Fig. VI-5

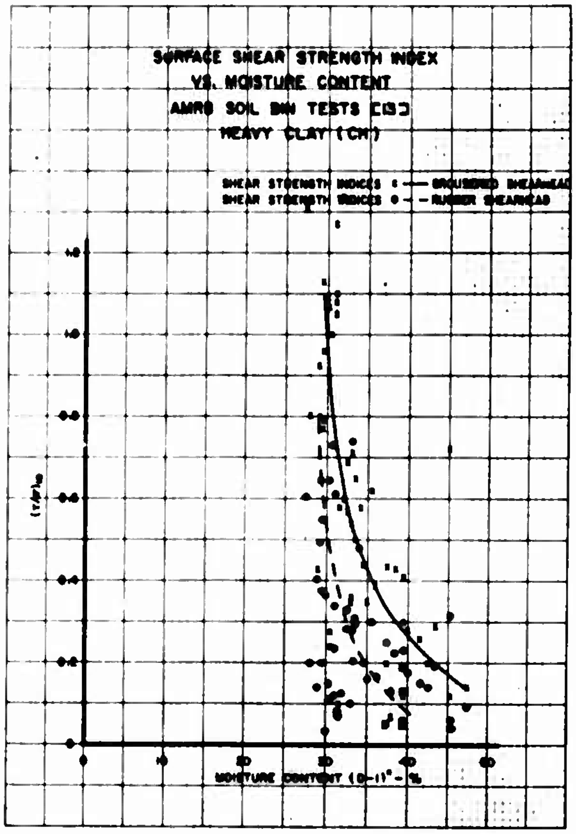


Fig. VI-6

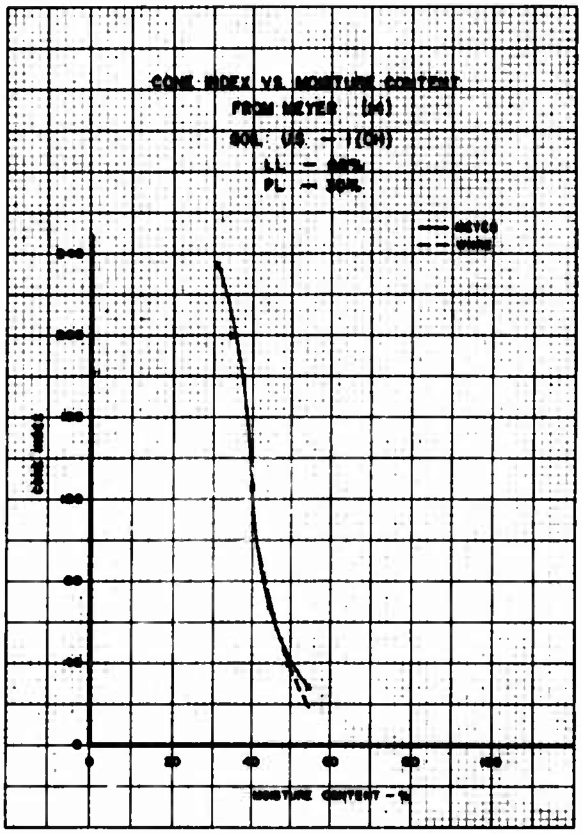


Fig. VI-8

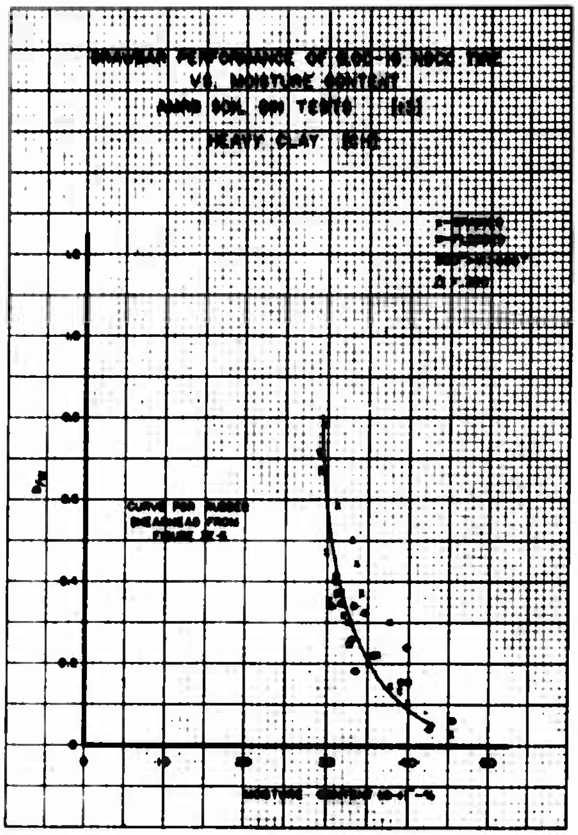


Fig. VI-7

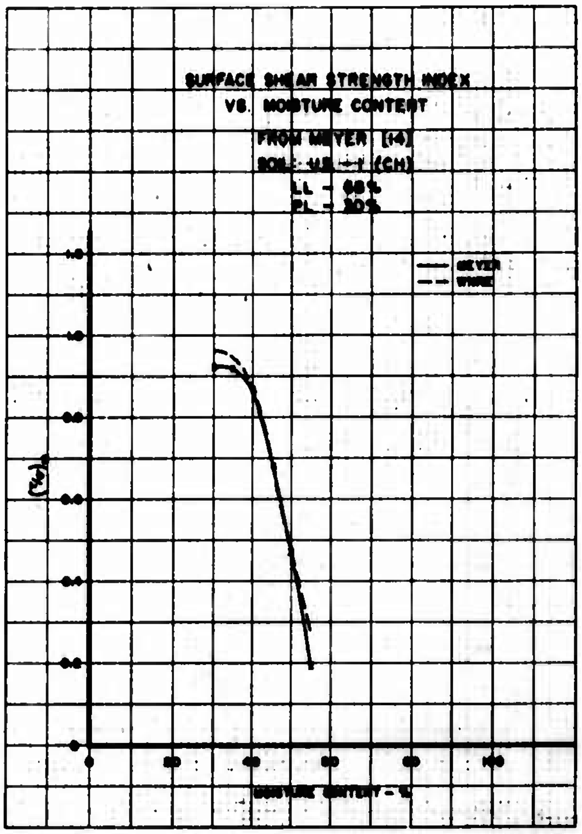


Fig. VI-9

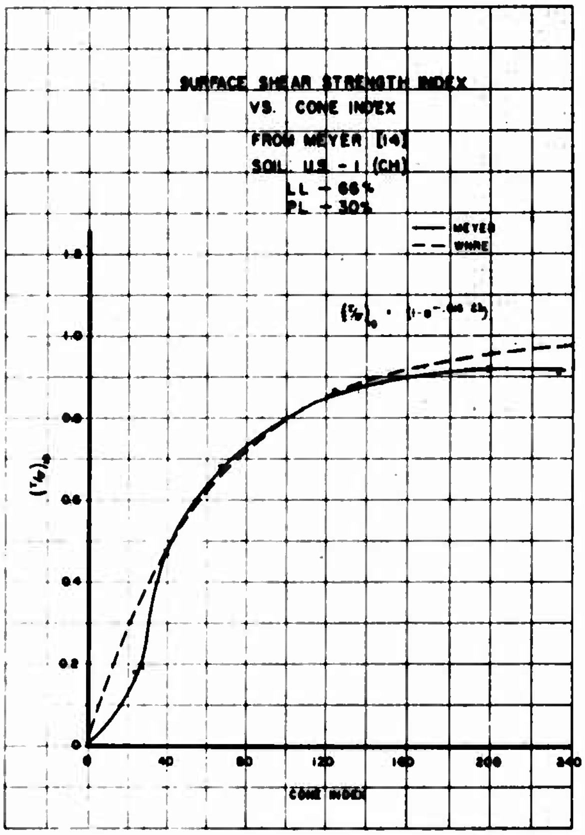


Fig. VI-10

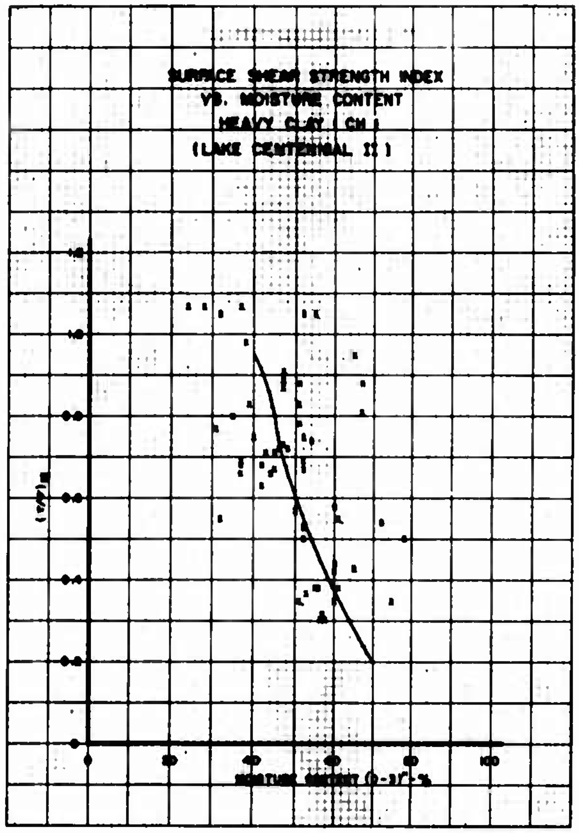


Fig. VI-12

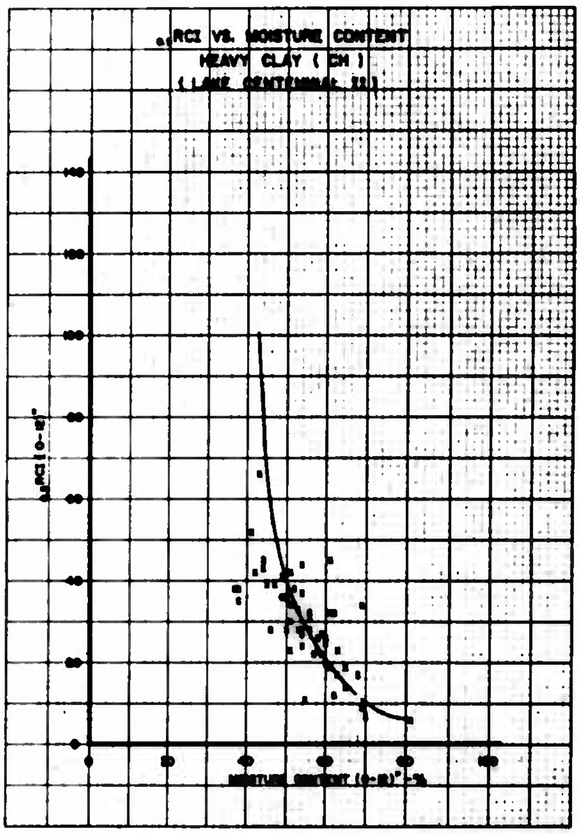


Fig. VI-11

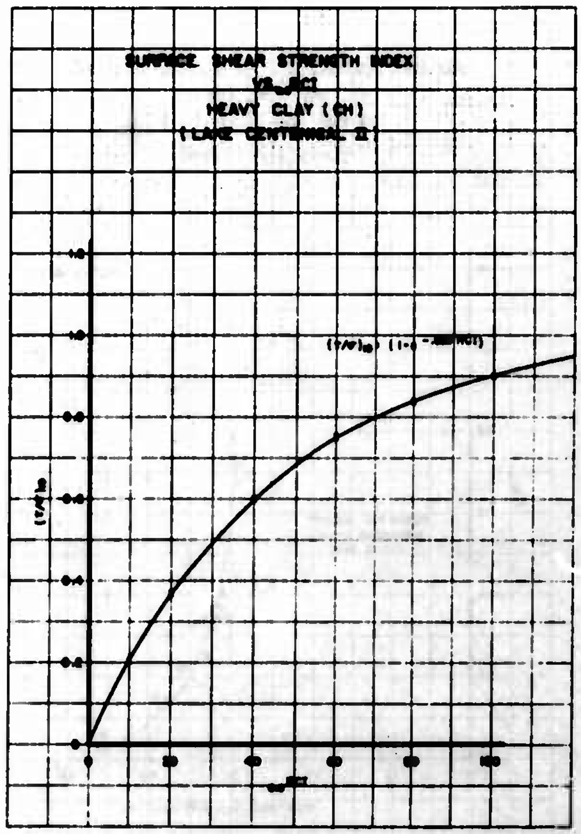


Fig. VI-13

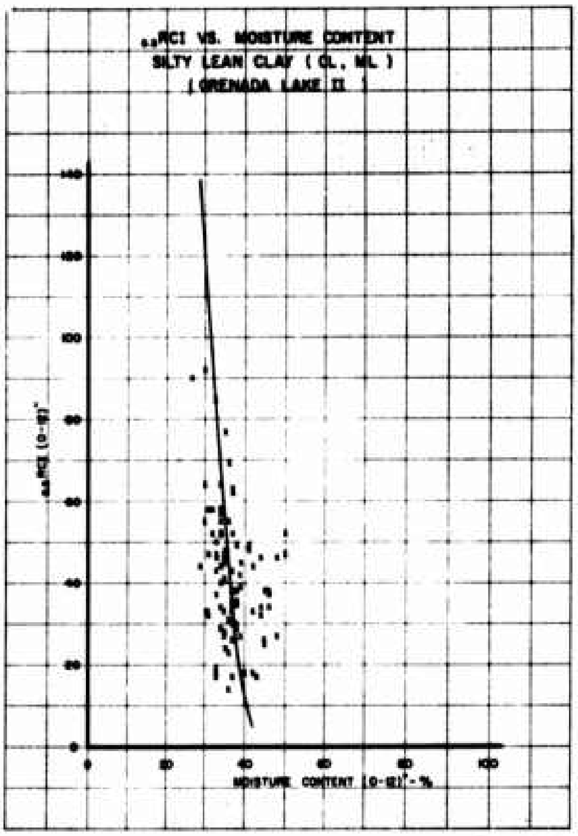


Fig. VI-14

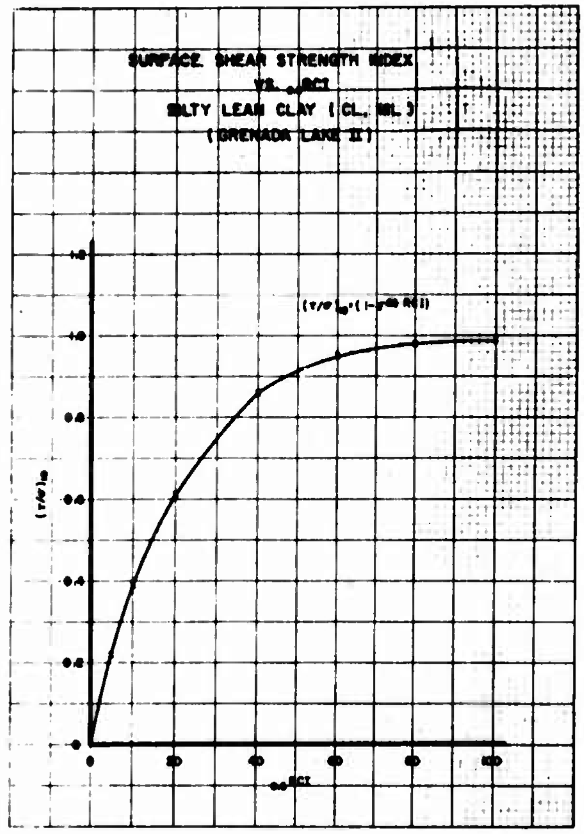


Fig. VI-16

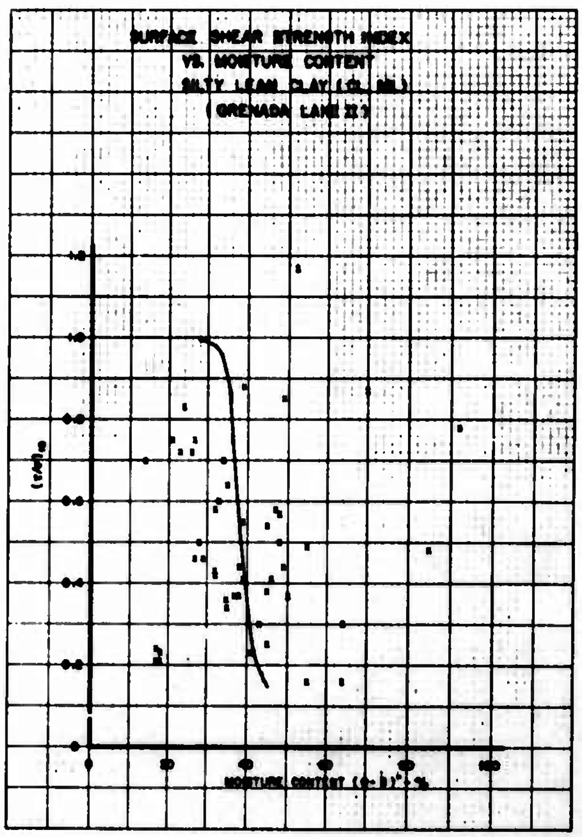


Fig. VI-15

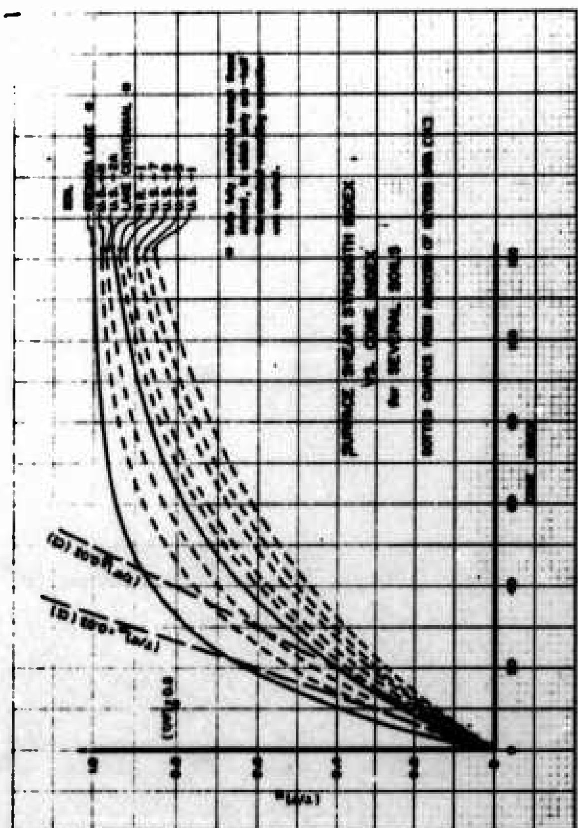


Fig. VI-17

ever, the range was not large (0.8 to 1.2) and it was considered that for present purposes the gain in simplicity of reducing the parameters to one far offset any loss in apparent precision.

Available field data were similarly treated. On the assumption that the soil body was uniform with depth to 12 inches, except in moisture content, recorded 0-12-inch average cone indices (with the 50 percent remolding correction thought appropriate to the one-pass problem applied) and concurrently taken moisture contents over the same depth were used to establish the $_{0.5}RCI$ versus MC curves, while the $(\tau/\sigma)_{10}$ versus MC curves were developed from 0-3-inch layer moisture content and concurrent sheargraph data taken in the same area. The results for the CH soil are shown in Figures VI-11-13, and for the (CL, ML) soil in Figures VI-14-16.

The final curves from the several analyses are consolidated in Figure 17. In the range of cone index values of prime interest in predicting the first-pass performance of reasonably mobile vehicles, say from 0-40, each of the curves shown could readily be replaced by a simple straight line function

$$(\tau/\sigma)_{10} = K_3(CI) \qquad (4)$$

where K_3 lies between about 0.01 and 0.03 and has the dimensions $(psi)^{-1}$.

In order to make a crude judgment on the relationship of this expression to those quoted at the outset of this discussion, it may be assumed (in the face of all the evidence) that τ is entirely cohesive. In this case

$$(\tau/\sigma)_{10} = c/10$$

and from (4)

$$CI = c/10K_3$$

which, for the range of values of K_3 suggested, indicates that

$$CI = 3.3\ c \text{ to } 10\ c,$$

which is familiar, at least.

APPENDIX VII

AN APPROXIMATION CONCERNING THE SKID STEERING OF TRACKED VEHICLES IN WEAK SOILS

Normal two-tracked vehicles are steered by "skid-steering," in which the moment required to change the vehicle heading, against the resistance principally of forces developed within the ground/vehicle contact surface, is generated by increasing the thrust developed by the outside track over that developed by the track on the inside of the turn. This is normally done by changing the speed ratio between the two tracks, and in more sophisticated vehicles involves but little power loss due to the use of various "geared-steer" or regenerative track speed control systems. If the vehicle is to maintain headway, however, total forward thrust must be maintained, which implies that the outer track must develop more traction in a turn than in straight-ahead operation. Thus

$$T_o + T_i = R_s \qquad (1)$$

and

$$(T_o - T_i)t = M_r \qquad (2)$$

where T_o = traction developed by the outside track

T_i = traction developed by the inside track

R_s = external motion resistance

M_r = moment resisting rotation of the vehicle, which at slow speeds is developed largely in the vehicle/ground contact

and t = the tread of the tracks, center to center.

Eliminating T_i between (1) and (2)

$$T_o = 1/2\left(\frac{M_r}{t} + R_s\right) \qquad (3)$$

When a vehicle is operating in limiting soil conditions ($RCI_1 = VCI_1$), the maximum traction which the soil will support is already being developed at each track, so that the added increment at the outside track required to steer ($M_r/2t$) may be expected to bring on immobilization. Alternatively, if the vehicle is to remain free to maneuver, RCI_1 must be somewhat more than VCI_1.

This problem has not been adequately treated, but a *first-order* estimate of this effect, based upon grossly simplified statics of the situation, has suggested that it is large, particularly in marginal conditions [29]. This treatment neglected the effects of track slip, both radially and tangentially. A vehicle operating in marginally weak soils, however, will be operating with considerable longitudinal slip.

In order to examine the order of performance change when track slip *is* considered, the model employed some years ago by Steeds [30] may be employed. In its simplest form, this model assumes that ground contact forces behave in the manner of dry friction; i.e., are of constant magnitude for any given incremental track area, regardless of their ultimate direction, and act in a direction opposite to that of the net velocity vector of that incremental area in relation to the ground. Although it is obvious that such a simple "friction circle" can be no more than a crude approximation to the true behavior of an actual track in a real situation involving such elements as sinkage and rutting, directional grousers, and non-uniform pressure and traction distributions over the contact area, it may be used for present exploratory purposes.

Figure VII-1 illustrates a single track contact patch rotating at a forward (tangential) speed, V, about a center "0" on a radius "r_t" and proceeding with slippage

$$V_s = V_t - V$$

where V_s = tangential slip speed

and V_t = track speed

Assume for simplicity that elements along the track centerline are adequately representative of the entire track width, and that maximum traction (T) is developed uniformly along the track length. At any section at a distance x from the normal through "0,"

$$\tan \alpha = \frac{x}{r_t}$$

and

$$V_1 = \frac{V}{\cos \alpha}$$

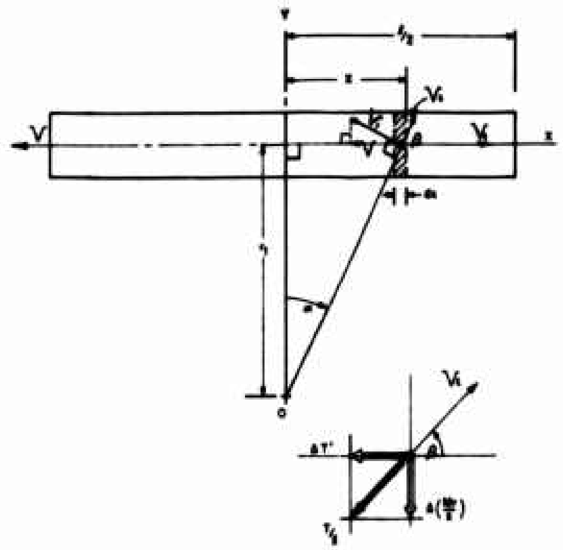
The net longitudinal speed (rearward) is

$$V_x = V_t - V$$

and the net lateral speed (outward in this quadrant)

$$V_y = V_1 \sin \alpha = V \tan \alpha \ .$$

Accordingly



SIMPLIFIED DIAGRAM OF SLIP RELATIONSHIPS UNDER A TRACK TURNING ABOUT CENTER "O".

Fig. VII-1

$$\tan \beta = \frac{V_y}{V_x} = \frac{V}{V_t - V} \tan \alpha$$

$$\text{or} \quad \tan \beta = \frac{x}{r} \left(\frac{1-s_j}{s_j}\right)$$

Where s_j is the normally defined slip ratio

$$s_j = 1 - \frac{V}{V_t}$$

Net traction (T') available over the track length (ℓ) is then (letting $\frac{s_j r_t}{1-s_j} = m$)

$$T' = 2\int_0^{\frac{\ell}{2}} \frac{T}{\ell} \cos \beta \, dx = \frac{2mT}{\ell} \int_0^{\frac{\ell}{2}} \frac{x^2 dx}{\sqrt{x^2+m^2}}$$

or

$$\frac{T'}{T} = N \sinh^{-1}\left(\frac{1}{N}\right) \qquad (4)$$

where T = maximum traction available in straight running.

Corresponding total resisting moment is

$$M_r = 2\int_0^{\frac{\ell}{2}} x \cdot \frac{T}{\ell} \sin \beta \, dx = \frac{2T}{\ell} \int_0^{\frac{\ell}{2}} \frac{x^2 dx}{\sqrt{x^2+m^2}}$$

$$\text{or} \quad \frac{M_r}{\frac{\ell}{4} \cdot T} = \sqrt{1+N^2} - N \sinh^{-1}\left(\frac{1}{N}\right) \qquad (5)$$

where the joint radius-ratio/slip parameter

$$N = \left(\frac{2r_t}{\ell} \cdot \frac{s_j}{1-s_j}\right) . \qquad (6)$$

Equations (4) and (5) are plotted as functions of N in Figure VII-2. To obtain an idea of the normal range of values found in practice, consider the M29C Weasel in a tight turn, for which $2r_\tau/\ell = 8$. (The slight difference, ± 10%, in ratio value between inner and outer tracks is neglected.) Then,

	N	$\frac{T'}{T}$	$\frac{M_r}{\frac{\ell}{4} \cdot T}$
for s_j = 0.05	N = 0.42	0.67	0.80
0.10	0.89	0.86	0.57
0.20	2.00	0.96	0.31
0.30	3.43	0.99	0.20
0.40	5.33	1.00	0.11
0.50	8.00	1.00	0.06

Thus, when operating at 20% slip, traction available is a full 96% of the nominal static value, but the moment resisting turning is only 31% of its static value. This is far from a negligible effect. Equation (3) may now be evaluated. From the preceding

$$T_o = T_{max} \left(\frac{T'}{T}\right)$$

and

$$\frac{M_r}{t} = \frac{1}{t} \cdot T_{max} \cdot \frac{\ell}{4} \left(\frac{M_r}{\frac{\ell}{4} \cdot T}\right)$$

$$\text{thus} \quad 2T_{max}\left(\frac{T'}{T}\right) = \frac{\ell}{4t} \cdot T_{max} \left(\frac{M_r}{\frac{\ell}{4} \cdot T}\right) + R$$

$$\text{or} \quad T_{max} \left[\left(\frac{T'}{T}\right) - \frac{\ell}{8t} \left(\frac{M_r}{\frac{\ell}{4} \cdot T}\right)\right] = \frac{R}{2} . \qquad (7)$$

From the report proper

$$R_s = 0.3 \left(\frac{VCI_1}{RCI_1}\right)^3 W \qquad \text{(eq. 28)}$$

and, for one track,

$$T_{max} = \frac{1}{2} \left[0.3 \, K_\tau \left(\frac{RCI_1}{VCI_1}\right)\right] \qquad \text{(eq. 28 and 29)}$$

Substituting these in equation (7), and assuming the case of a vehicle proceeding in decidedly marginal conditions for which slip may reasonably be taken to be about 30%

$$\left(\left(\frac{T'}{T}\right) = 0.99, \left(\frac{M_r}{\frac{\ell}{4} \cdot T}\right) = 0.20 \right)$$

gives the controlling soil strength, in terms of VCI_1, as

$$\left(\frac{RCI_1}{VCI_1}\right) \simeq \left(\frac{40}{K_\tau (40 - \frac{\ell}{t})}\right)^{1/4} \qquad (8)$$

From this it appears that, contrary to what has usually been assumed, the steering ratio (ℓ/t) has but little influence upon the low limit of soil strength (RCI_1) required. Furthermore, taking $\ell/t = 2$ (normally an absolute maximum) and $K_\tau = 1$

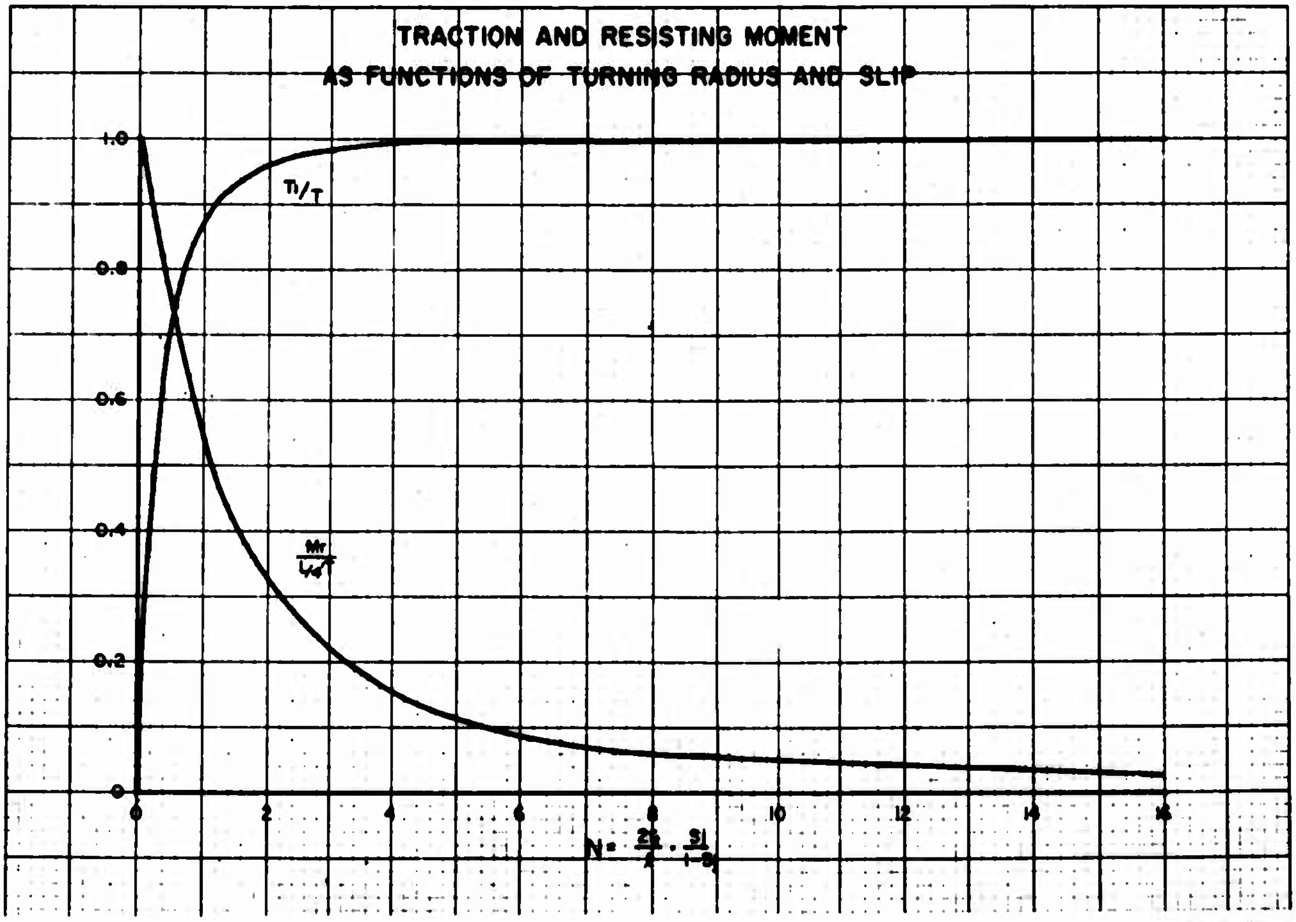


Fig. VII-2

$$\frac{RCI_1}{VCI_1} \simeq 1.013$$

It thus also appears that the fact of skid steering per se (at reasonable minimum radii- say $\frac{2r_t}{l} > 8$) does not materially change the limiting lowest soil strength requirement.

These conclusions, of course, are dependent upon the adequacy of the simple model used, and must be treated with caution pending some direct experimental verification.

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13. ABSTRACT

This report presents results are presented of an investigation of the one-pass performance of self-propelled vehicles in natural, weak, fine-grained soils for the following purposes: (1) to develop (a) a reliable strength index for fine-grained soils with which predictions may be made of the performance of a vehicle on its first pass on a straight, level course, and (b) a nominal vehicle load index to be used with the soil strength index to establish whether or not a vehicle will go; and (2) to provide means to predict (a) one-pass drawbar pull and slope performance in soils having strengths in excess of the minimum required for one vehicle pass on level terrain, (b) the increment of soil strength index necessary to permit a vehicle to maneuver freely, and (c) the probable maximum speed of a vehicle operating in a terrain situation where the soil strength index exceeds the net vehicle load index.

First-order answers are proposed to the five basic questions utilizing minor adaptations of techniques and concepts developed ~~by WES~~ in the~~ir~~ 50-pass trafficability work, and defining modified "vehicle cone indices" (VCI_1) and soil "rating cone index" (RCI_1) procedures appropriate to the one-pass problem. The ratio (VCI_1/RCI_1) is used as the basic soil loading numeric in simple approximate calculations of drawbar pull, grade performance, soil strength increments necessary to permit free maneuvering, and probable maximum speeds, all as influenced by soil strengths.

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